

Waite & Bartlett M Co

ESTABLISHED 1881.

Illustrated Price List.

W26

g W145c

Waite & Bartlett

MANUFACTURING CO.



ELECTRO-MEDICAL AND ELECTRO-SURGICAL

INSTRUMENTS

OFFICE:

143 EAST 23D STREET,

Factory: 204 & 206 EAST 23d STREET,

NEW YORK.

ERRATA.

Page 8.—No. 4 should be No. 14.

Page 39.—The prices are NET.

Page 48.—In definition of "Ohm's Law" the last letters should read
 $E = C \times R$ instead of $E = C + R$.

And on same page commencing "In the third case" it should read
 $E.M.F. = 7$ amperes instead of $E.M.F. = \text{times}$.



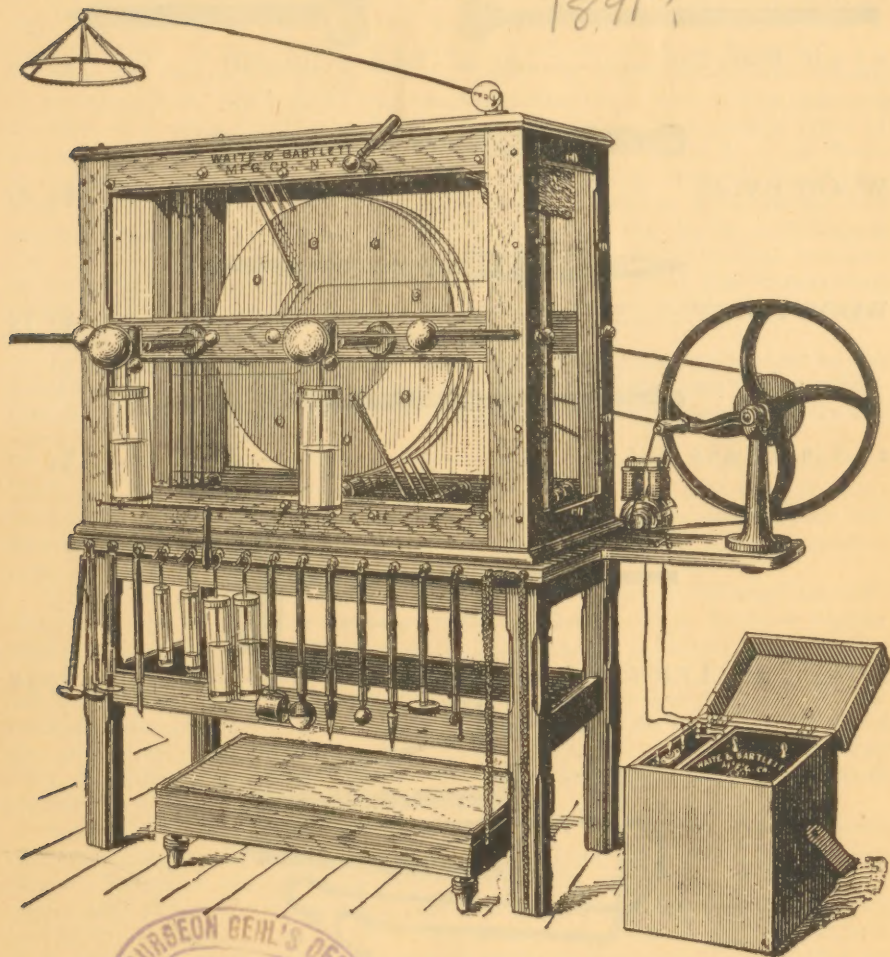
HOLTZ INDUCTION MACHINE,

As Improved by Prof. A. L. RANNEY, M. D.

See "Medical Record," October 17th, 1885.

No. 1.

1891?



FOR THERAPEUTICAL USE,

With six 26-inch revolving plates and set of electrodes (*shown on following page*), set of medical Leyden jars, with attachments for giving the induced current, and insulated platform.

Height, 63 inches; width from back to pole pieces, 36 inches; total length, 72 inches.

PRICE, COMPLETE, - \$400,

FURNISHED IN HANDSOME ANTIQUE OAK OR MAHOGANY CASES.

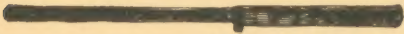

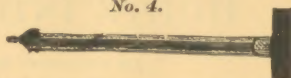
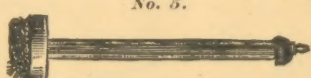



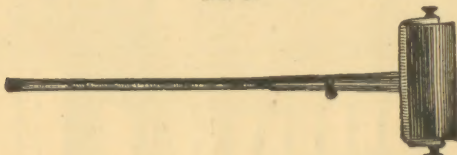
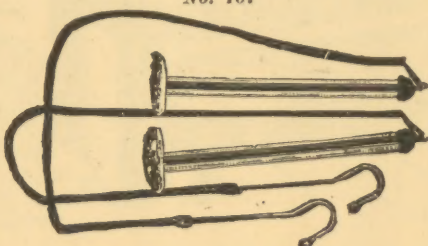
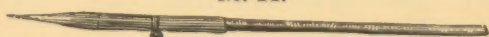
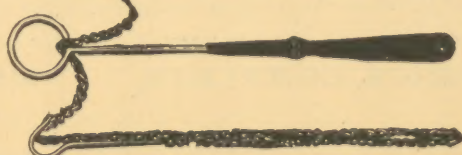
Price of Machine, complete, with Electro Motor for using the Edison Current.....	\$440.00
Price of Machine, complete, with Electro Motor for using Storage Battery Current.....	435.00
Price of suitable Storage Battery for running Machine two consecutive hours daily.....	80.00

These Machines are shipped in crates, entire, and do not have to be put together by the purchaser.

W 26
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2

WAITE & BARTLETT MFG. CO., NEW YORK.

<i>No. 2.</i>	
	
CARBON ELECTRODE.....	\$2 00
<i>No. 3.</i>	
	
1 1-4 in. Brass Ball.....	\$3 00
<i>No. 4.</i>	
	
RUBIFACIENT.....	\$3 00
<i>No. 5.</i>	
	
BRASS BRUSH.....	\$3 00
<i>No. 6.</i>	
	
WOOD BALL.....	\$2 00
<i>No. 7.</i>	
	
WOOD POINT.....	\$1 75
<i>No. 8.</i>	
	
2 1-4 in. BRASS BALL.....	\$4 00
<i>No. 9.</i>	
	
SPINAL ROLLER for Massage.....	\$5 50
<i>No. 10.</i>	
	
HANDLES AND SPONGES.....	\$3 50
<i>No. 11.</i>	
	
BRASS POINT.....	\$3 00
CHAIN	{
HOLDER,	
	
	\$3 50

THE ABOVE ELECTRODES ARE FURNISHED WITH STATIC MACHINE ON PAGE 1.

Extract from "Lectures on Nervous Diseases," By Prof. A. L. Ranney, M. D.
F. A. Davis, Publisher, Philadelphia, 1888.

THE PRINCIPLES OF STATIC INDUCTION.

The application of the principles of static induction as demonstrated in the machine devised by Holtz, is difficult to fully explain without devoting more time to the general subject of electrical induction than is deemed wise. It may be roughly summarized, however, as follows:

Any body when electrified has the power, to a greater or less extent, of exerting (even through an intervening substance, which in this instance consists of a plate of glass,) a peculiar effect upon the electrical state of another body closely adjacent to it in position. It tends to draw from the opposed body that variety of electricity which it does not itself possess. Now, if an intervening substance happens to exist between the two bodies, the electricity drawn toward it by induction may be deposited upon the corresponding side of that substance; and a proportionate amount of electricity of the opposite variety is abstracted from the intervening body. Hence the intervening body becomes either positively or negatively electrified on one side as the case may be.

In the induction machine, the intervening substance happens to be the revolving glass plate; and the opposed bodies are the two paper collectors and the two metal combs of the machine, which are separated by the revolving plate of glass.

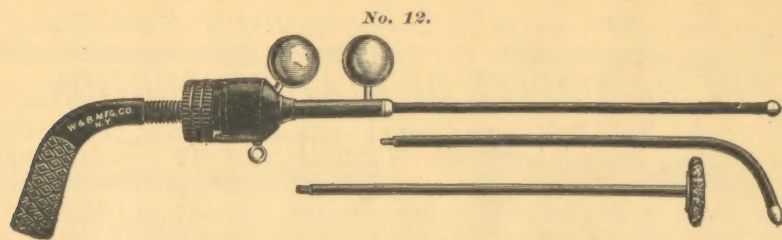
In all induction machines, the charge is *practically constant when once established*—provided the mechanism be perfect and the plates kept absolutely dry. Under such conditions, it ought never fail to produce its full effects when the wheels are set in revolution. This is a great desideratum in medicine.

In the original Holtz machine a charge was primarily effected by rubbing a piece of ebonite briskly with cat-skin until it became highly charged with negative electricity, and then applying it closely to one of the paper collectors on the stationary plate of the machine. By the "law of induction" the comb opposed to this paper collector becomes electrically excited immediately. It at once deposits *positive electricity* on the side of the revolving plate nearest to the comb, and takes *negative electricity* away from the revolving plate. Thus the revolving plate becomes *positively electrified* to a very high degree at this point.

Now when the wheel is made to revolve to that point where it meets the other paper collector upon the stationery plate, induction again takes place. Negative electricity is deposited, (1) by the collector on the opposite side of the revolving plate (the side nearest to the paper collector) and (2) by the metal comb; at the same time positive electricity is taken from the adjacent side of the revolving plate by the collector, and also by the metal comb, from the opposite side of the revolving plate. This interchange of electricities charges the "positive pole" of the machine.

The revolving plate (now excessively charged with *negative electricity*) goes on to the next paper collector. Here a similar exchange of electrical conditions occurs. The negative electricity is taken from the revolving plate by both the paper collector and the metal comb, and positive electricity is given to the plate in exchange from both of these sources. Hence the "negative pole" becomes highly charged.

As long as the revolving wheels are kept in revolution, this interchange of electricities continues at each of the poles; hence the accumulation at each pole soon becomes sufficiently great to allow of an escape from pole to pole in the form of a spark, or into the atmosphere as a "luminous brush" easily seen in the dark.



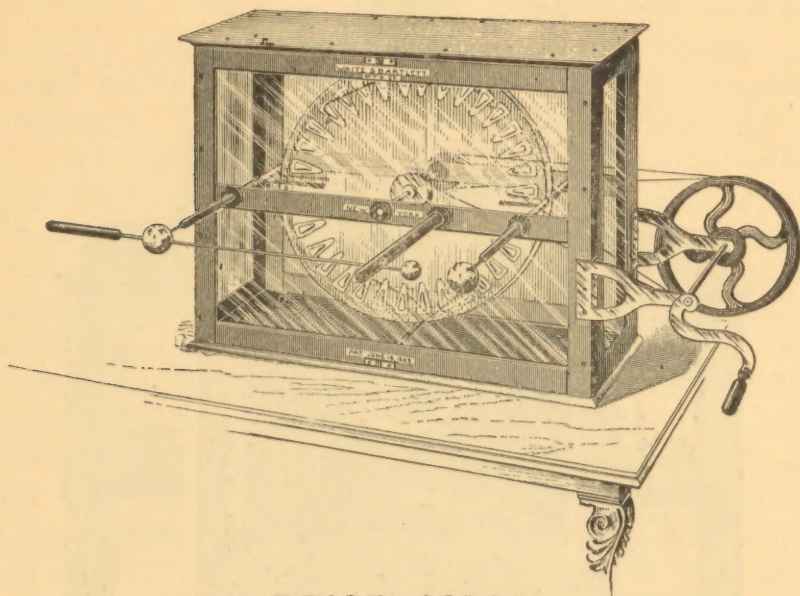
Morton's Pistol Electrode. Price \$25.00.

Electric nerve-and-muscle reactions had previously been obtained by means of the interrupted galvanic and the Faradaic currents. It had also been noticeable that the "spark" discharged on a nerve motor point, or over a muscle, produced the characteristic reactions. But the spark was painful, and difficult to direct accurately, particularly about the face and head. To avoid these objections, Dr. Morton arranged this electrode, by means of which the disruptive discharge or spark of static electricity takes place between two brass balls, one of which is in relation with the "ground," while the other is connected to an ordinary moist sponge electrode. This in turn is applied at the point desired of the patient charged on the insulated platform.

As a result, for every static discharge occurring between the two brass balls there is a dynamic discharge or current at the point where the sponge is applied, and nerves and muscles may be stimulated, or rather "irritated," exactly as by the ordinary interruptions of battery currents, direct or induced.

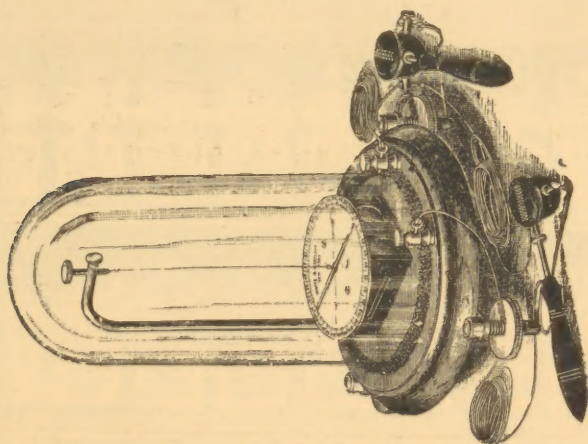
This electrode is another means of converting static into dynamic electricity, based upon the principle described under the name of "static induced current" by Dr. Morton.

This "static induced current," as has been already stated, was obtained by attaching ordinary sponge electrodes by their connecting rods to the outer layer of tin-foil on the Leyden jars. The patient, in other words, replaced the usual connecting rod between these coatings. On putting the machine in motion and causing a spark between the poles, a "current" was felt by the patient, no insulation of course being required. The advantage of this method is that the ordinary Holtz machine may, when required, be called upon to perform the work of an ordinary Faradaic or induction machine.

*RANNEY'S IMPROVED CHARGING MACHINE.**No. 122.*

PRICE, \$30 00.

Ranney's improved machine for charging the large Holtz machine is of great value during the sultry months of July and August when there is so much moisture in the atmosphere as to interfere with the workings of the machine. Instruments that have given trouble have never failed with this charger. W. A. Hammond, M. D., of Washington, I. C. Rosse, M. D., Washington, A. L. Ranney, M. D., 156 Madison Ave., N. Y., Holbrook Curtis, M. D., 30 Madison Ave., N. Y., S. N. Brayton, M. D., 202 Del. Ave., Buffalo, N. Y., Dr. Martin, 145 Bryant Street, Buffalo, N. Y., J. W. Putnam, M. D., Buffalo, N. Y., and others, are using them with perfect satisfaction, and to whom we refer those interested.

No. 123.*DIFFERENTIAL CALLORIMETER.*

COMPLETE WITH THERMOPILES, FOR TEMPERATURE DIAGNOSIS.

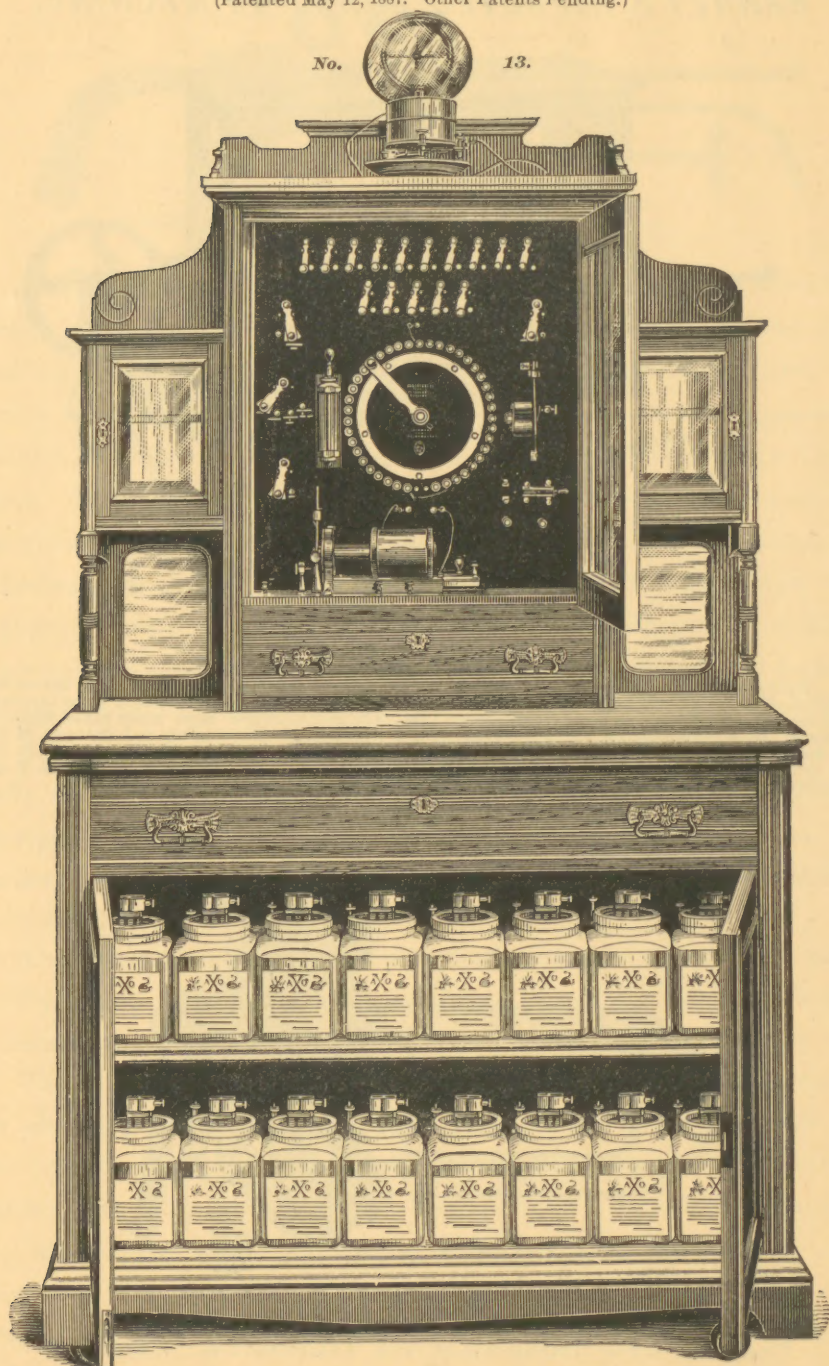
PRICE, \$6000.

RANNEY CABINET, \$260.

(Patented May 12, 1887. Other Patents Pending.)

No.

13.

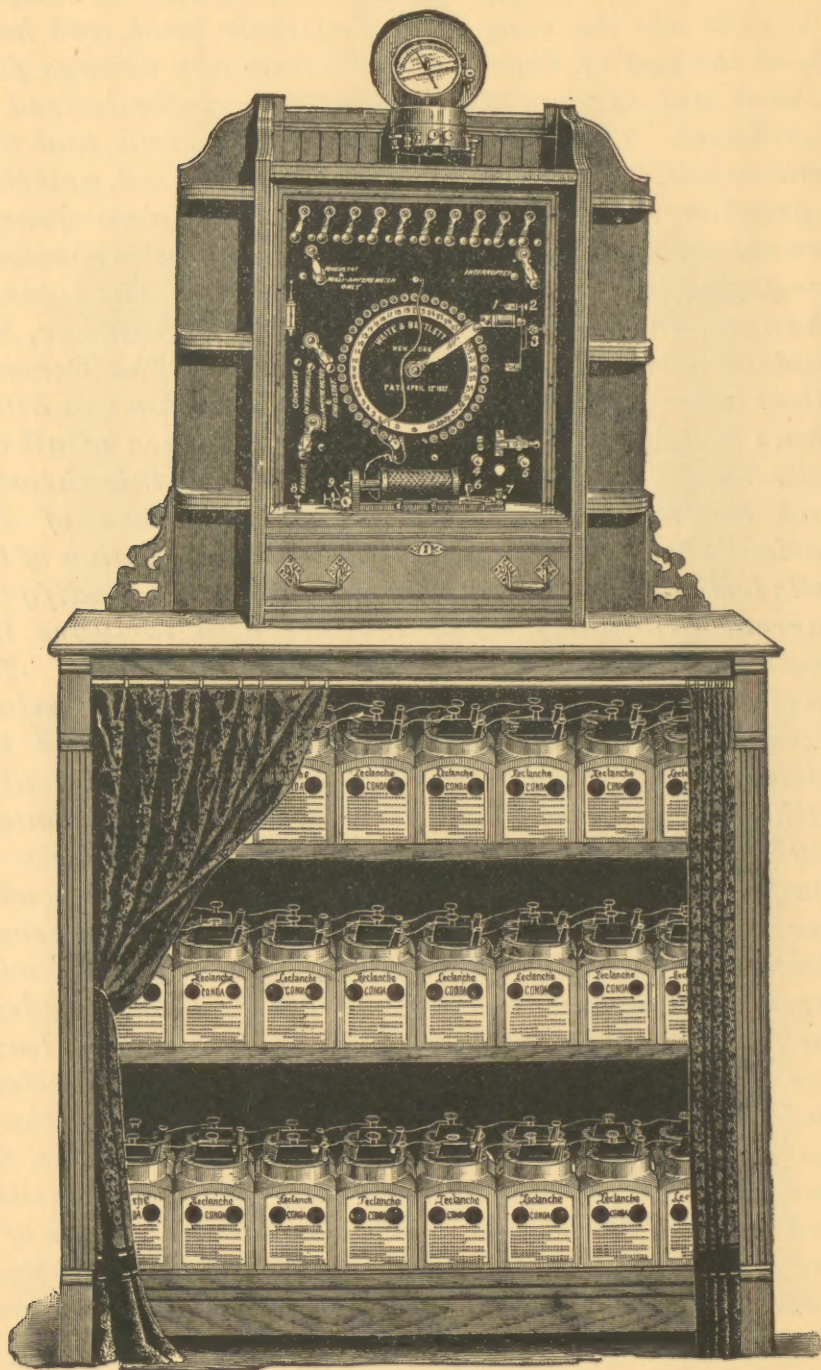


Total Height of above, 69 inches. Length, 41 inches. Depth, 22 inches.
 For Description see next Page. ANTIQUE OAK, OR MAHOGANY.

Complete Office and Wall Cabinets, contain for use of constant current, 40 cells of Axo Leclanche battery. The cells are the most perfect of their kind, and have stood the test of time and use, and are always furnished, unless some other form is specially desired by purchaser. The current selector is universal, and any cells, or cell, from the entire series may be used, and thus a great saving of the battery, and uniform wear of same, are obtained. It contains also an automatic rheotome for giving interrupted galvanic currents. The polarity changer, or commutator, is of substantial make, has rubbing contacts and keeps in order. The German silver wire rheostat has coils from 5 ohms to 5000 ohms resistance each, the entire resistance of all the coils being 17,000 ohms, and by means of this rheostat and the milli-ampere-meter the resistance of the patient's body may be measured or the condition of the cells tested. The water rheostat is used to modify the current gradually. The Cabinet also includes the Dubois-Reymond style of Faradic apparatus. The secondary coil can be removed, and coils of various sizes and lengths of wires may be used, and the various qualities of current obtained. It is provided with a slow and rapid rheotome, also with a contact key to be operated by the finger, a great help in diagnosis. The instrument, also, is furnished with our milli-ampere-meter for measuring the current strength. The case contains two small closets with bevel glass doors, two large drawers and a sliding shelf available as a desk. The castors are of large size, and rubber tired, making it easy to roll, noiseless, and capable of being moved on a polished floor without marring the same. The lower part has doors in the back as well as in the front, making the cells accessible, and easy of inspection. We append the names of a few prominent physicians using this form of instrument. We furnish with this apparatus an assortment of electrodes. With the Ranney Cabinet we furnish a set of Engelman Coils.

MUNDE'S CABINET, \$215.

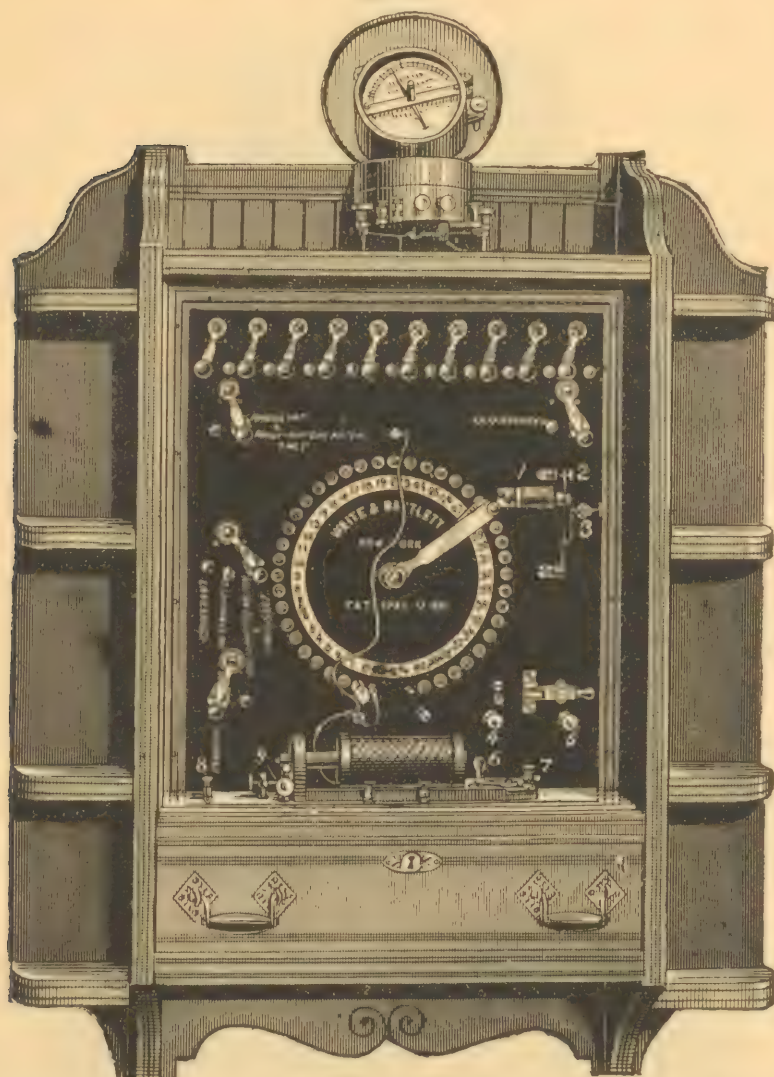
No. 4.



Total Height of above, 63 inches. Length, 40 inches. Depth, 13¼ inches.
 Patented April 15, 1890.

HAMMOND WALL CABINET.

No. 15.



The above cut represents the Switch Board in our perfected Cabinet, in Wall Cabinet form. Cells may be put in any convenient place.

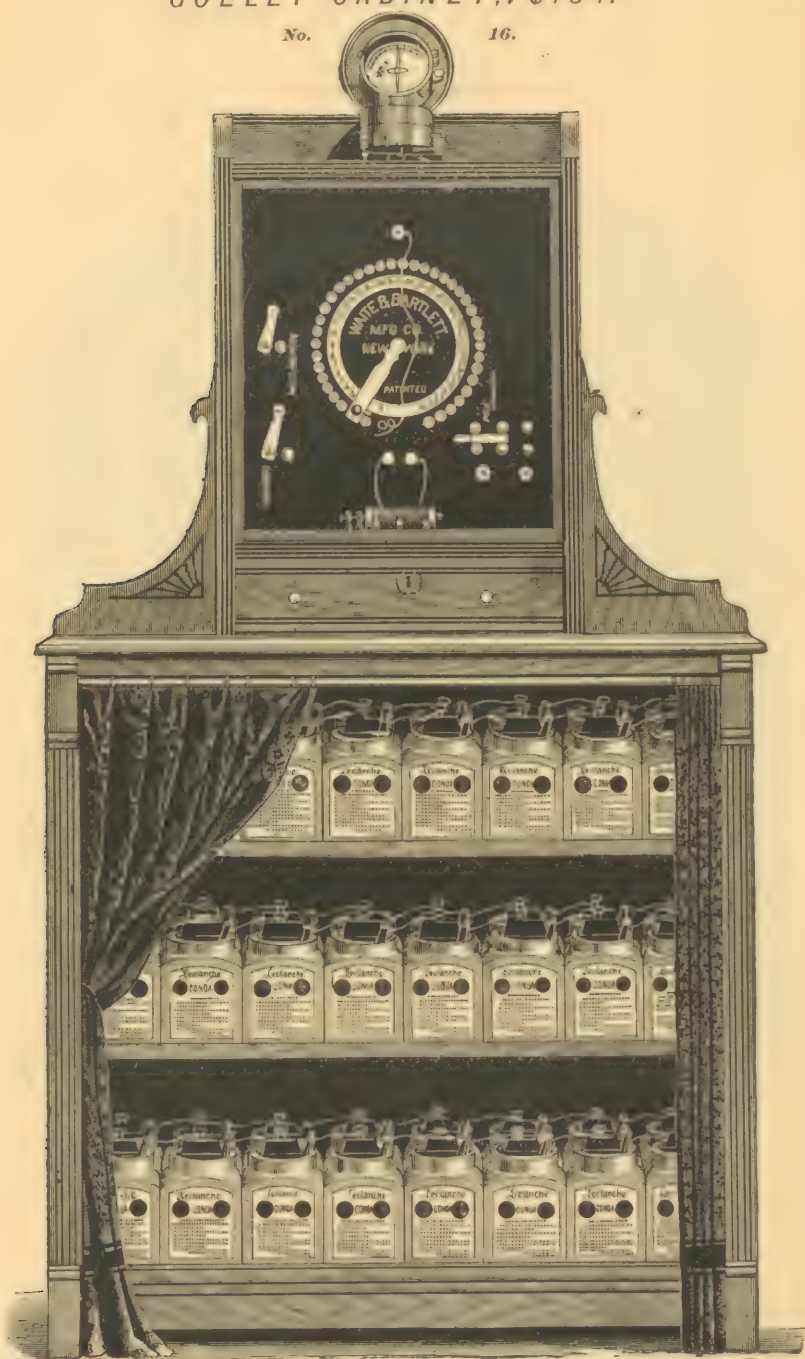
PRICE.—COMPLETE, WITH CELLS, AS SHOWN ABOVE, AND A FINE ASSORTMENT OF ELECTRODES, \$200.

Height, 34 inches. Width, 29 inches. Depth, 8 inches.

GOELET CABINET, \$134.

No.

16.



Total Height, 59 inches. Width, 37 1-2 inches. Depth, 13 1-4 inches.
(Patented April 15, 1890.)

THE GOELET FLOOR CABINET

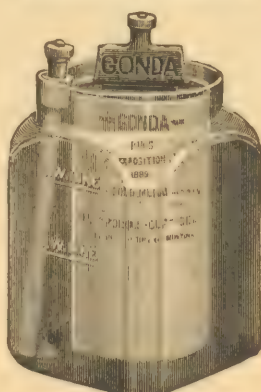
Has 40 cells of Genuine Leclanche Gonda Porous Cup Battery, Universal Switch Board, Pole changer and No. One Faradic Coil. It is also furnished with our No. 2 Milli-ampere-meter. It has a brass rod and rings, by means of which a curtain may be attached to cover the cells. This Cabinet is put on the market to meet the demand for one cheaper than the floor or wall cabinet. A Du Bois-Reymond coil will be furnished for \$10.00 extra, a water rheostat for \$5.00 extra, and a galvanic vibrator for \$10.00 extra. A water rheostat for \$5 extra, and a galvanic vibrator for \$10 extra.

If you contemplate purchasing a cabinet, ascertain always what it contains, and you will be neither disappointed nor misled. All of our goods are warranted to be as represented. The Axo cells will be furnished with above Cabinet for \$8.00 extra.

The cells represented below are used in our Cabinets, the Axo with all except the Goelet style, with which the Gonda Porous Cup Battery is used. We have adopted these cells because time and use have proved them to be the best for electro-therapeutical work. Some of the leading specialists have had them in constant use for five years, and they still remain in fine working condition.

AXO BATTERY.

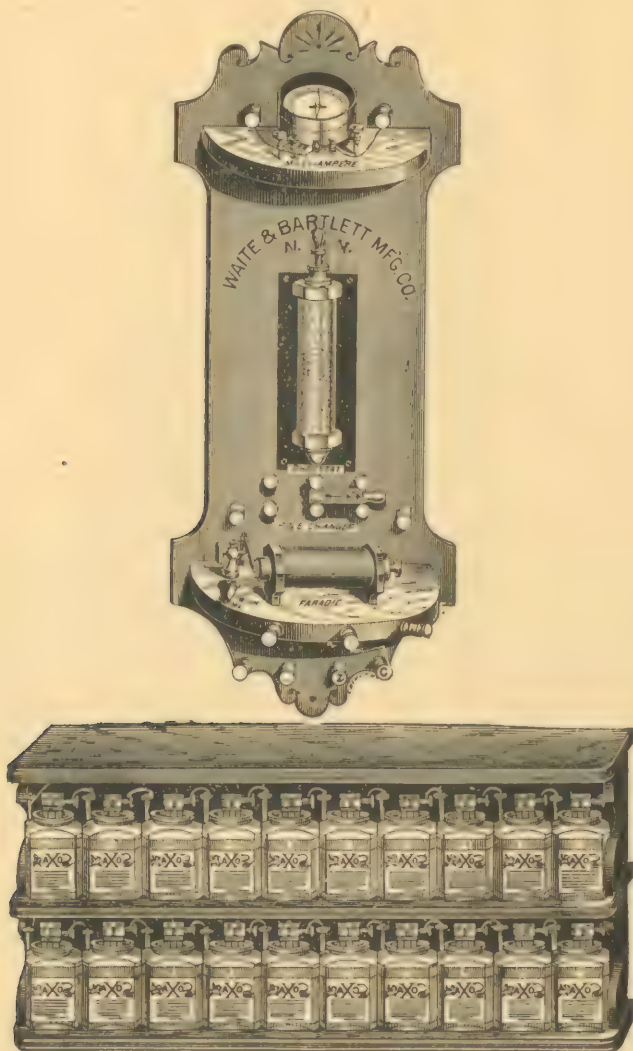
"GONDA POROUS CUP" BATTERY.



"Axo" Battery Complete "Axo" Porous Cup. Genuine "Gonda Porous Cup" Battery complete.

Genuine Gonda Porous Cup and Zinc.

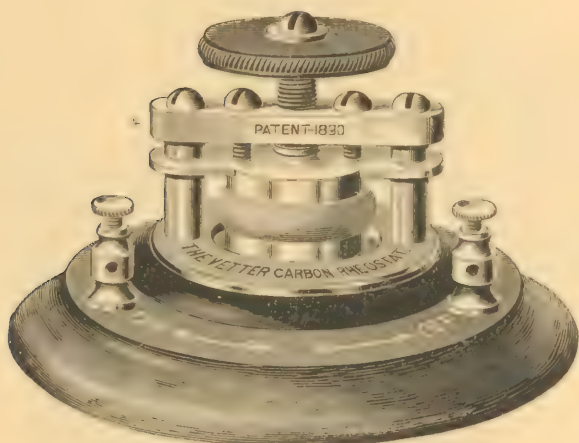
No. 17.



With 40 Cells, PRICE, \$100.00.

The above cut illustrates our new form of current controller combined with Milli-ampere-meter, and 40 axo cells. These cells can be placed in a cellar or cup-board, or on a series of shelves, as shown in the cut, the 2 terminal wires being fastened in binding posts 3 and 4, binding posts 1 and 2 on the shelf of bracket, are for the purpose of connecting conducting cords. They are marked positive and negative, as also 3 and 4 will be marked respectively, zinc and carbon. The carbon will be the positive current as it comes from the battery.

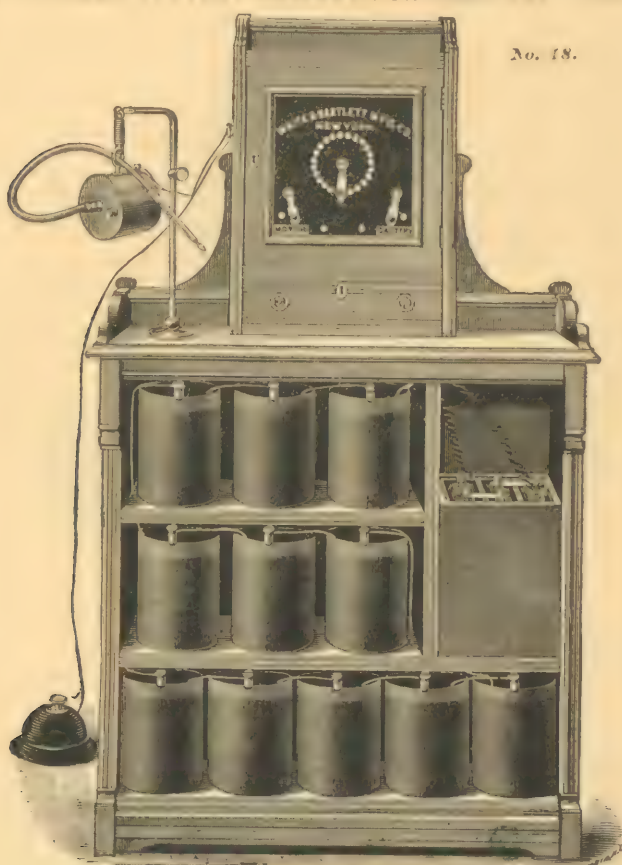
No. 124.



CURRENT CONTROLLER OR CARBON RHEOSTAT.

The purpose of this instrument is to control the entire current of 40 or 60 cells without the use of a switch-board, and to gradually vary the current from 0 to the full strength of the battery without shocking the patient. This is accomplished to a nicety from "off" or "on" by gradually turning the milled disc in the directions as indicated by the arrow marked on base, thereby compressing or relaxing the granula carbon contained in the rubber pouch. The absence of liquids and the non-corrosibility of the material that offers the resistance, places it in advance of any water rheostat that has ever been constructed.

PRICE \$16.00.

THE RAY STORAGE CAUTERY CABINET FOR NOSE AND THROAT WORK.

Total height, 59 inches. Width, 37 $\frac{1}{4}$ inches. Depth, 13 $\frac{1}{4}$ inches.

Patented April 15th, 1890.

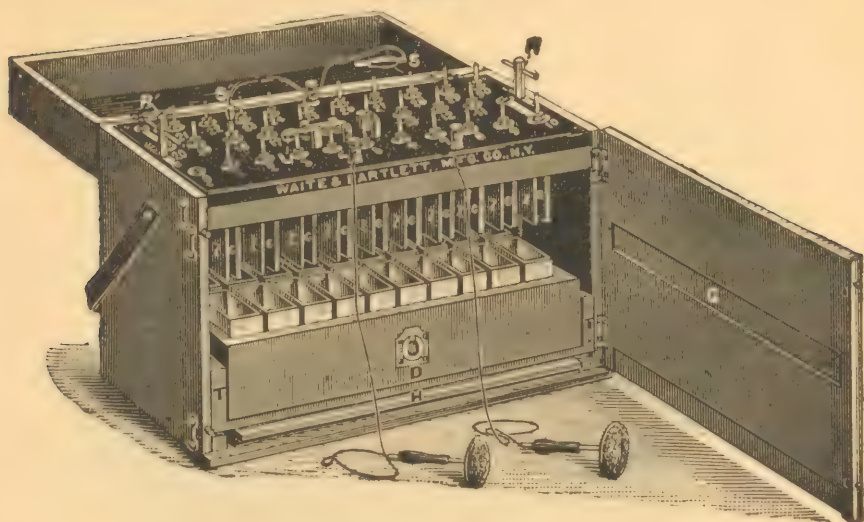
PRICE COMPLETE \$173.00.

This cabinet was devised to fill the wants of Dr. J. M. Ray, of Louisville, Ky. It is so constructed that the charging cells are of easy access, also the storage battery itself, is in plain sight, and so arranged, that the connections are protected from all gases, thus avoiding oxidation of the connections in the storage battery.

The switchboard or rather the Rheostat, is so arranged, that you can throw the resistance in gradually, thus graduating the current or the amount of heat you require, to a nicety. By a separate switch you can use the current for heating the burners. The other switch throws the current on the motor, which is on a stand to the left of the cabinet, as you face it. This is the most complete instrument of the kind, that has ever been put on the market. This cabinet consists of a finely finished oak case, a 3 cell storage, 11 charging cells, motor, stand, floor push, and flexible shaft complete, 2 drills, 2 burrs, 2 trephines, also one loop and handle, 1 plain handle and 6 burners.

We have an extra attachment of a shelf, suggested by Dr. Ray, that is to be fastened to the front of the cabinet, on which you can place your spray tubes and medications, which makes it a very convenient, useful, and handsome attachment.

No. 19.



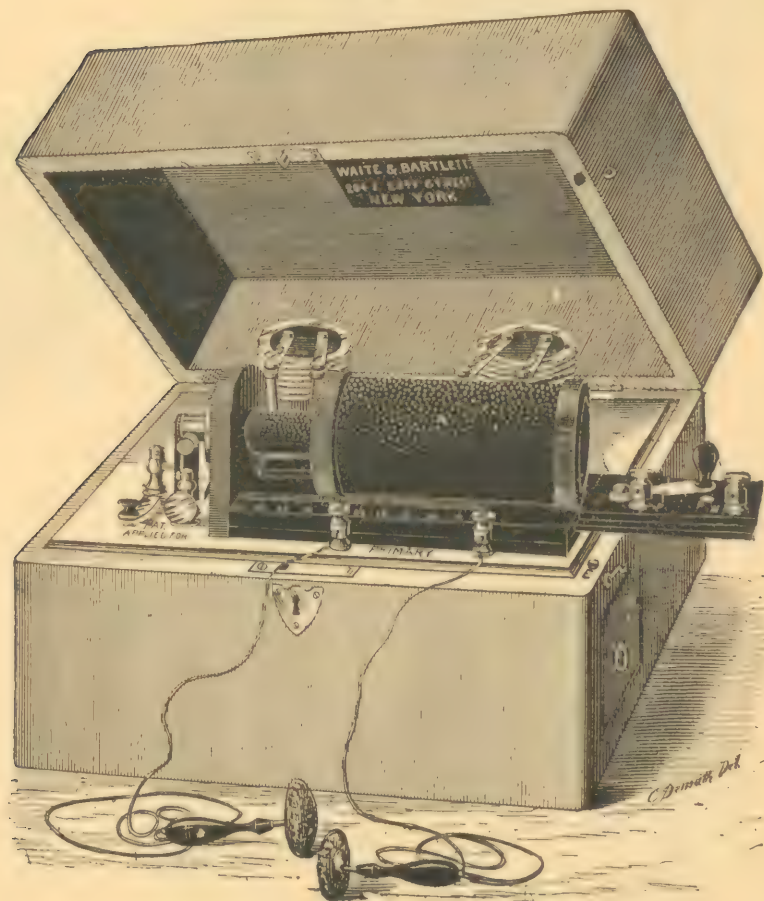
PLUG AND SOCKET GALVANIC BATTERY.

6 Celled.....	Price, \$12 00
12 " 	20 00
16 " 	24 00
20 " 	30 00
30 " 	38 00

Above engraving shows a convenient form of portable Galvanic Battery. It is represented with the door open showing the construction of the various parts. The cells are in a tray which is supported by an outside tray or shelf, into which the cell tray slides and can be readily withdrawn without attention to any mechanical device whatever. The lifting rods, R, R., screw into the ends of the outside tray, and by raising the same the cells are also raised until the elements are properly immersed in the fluid contained therein. The box contains a compartment at the bottom into which the hydrostat board H is put when not in use.

When the battery is to be carried about, this board, H, is placed on the top of the cells with its rubber padded side down; the two rods, R, turned, raising the top of the cells tightly against the padded board, thus sealing them. The battery may then be carried without spilling. The 30 cell, of the above type, will give sufficient current for Apostoli's method of treating fibroid tumors and other gynecological work. The battery is furnished in handsome antique oak, or mahogany case, finely polished, and in six different sizes. We guarantee these batteries to be first class and to give satisfaction.

No. 20.



NEW No. 4 FARADAIC BATTERY.

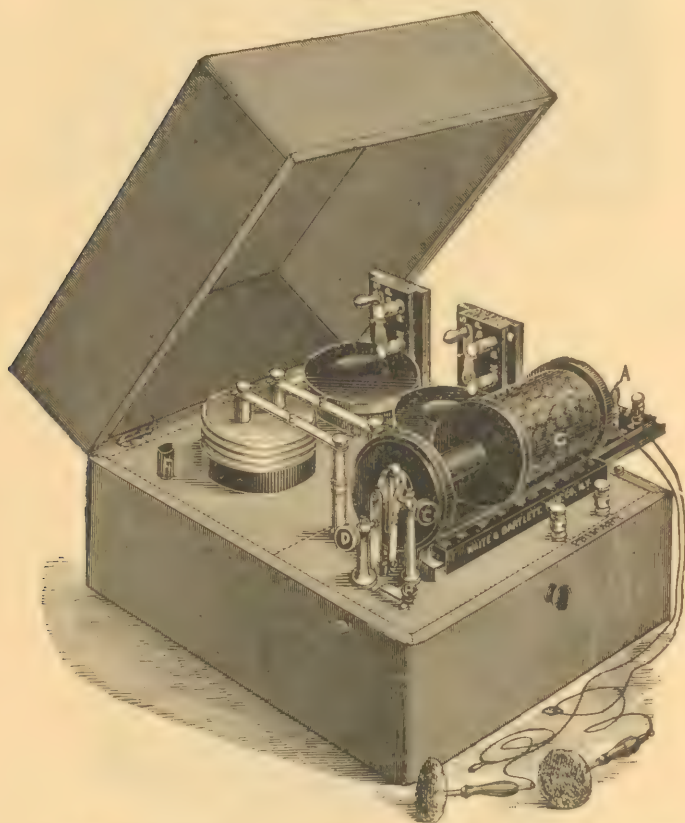
Price, \$28.00.

Has two cells, and extra large coil, fast and slow vibrators, Du Bois-Reymond coil, and single contact key for diagnosis and muscle testing.

THE ENGELMANN FARADAIC BATTERY.

PRICE, \$40.00.

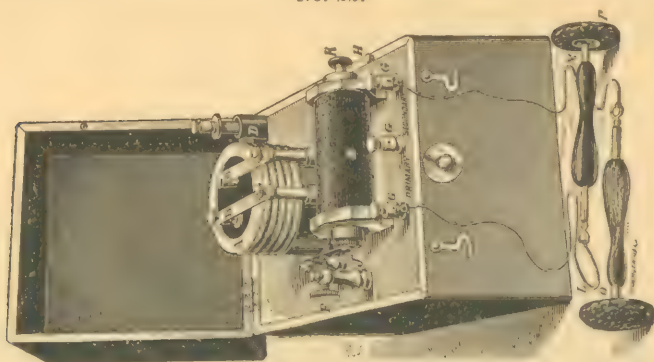
No. 21.



The above Battery is constructed after the data given in "The use of Electricity in Gynecological Practice," by G. J. Engelmann, M. D., of St. Louis. It is provided with 3 coils of different sized wires, and of different lengths. The effects of these three coils are markedly different.

These three coils are marked respectively: Coarse, fine and medium, as, C, F and M. The diameter and length of wire on each coil is also marked in millimeters and meters. Either of the three coils may be used according to the effect it is desired to produce. Use coarse coil for muscular contractions as for contracting down a subinvoltuted uterus with medium speed of interruptions. Use fine coil to relieve pain, as in cellulitis; use medium coil when muscular contractions are to be produced, but the parts are too sensitive to allow use of coarse coil.

No. 22.



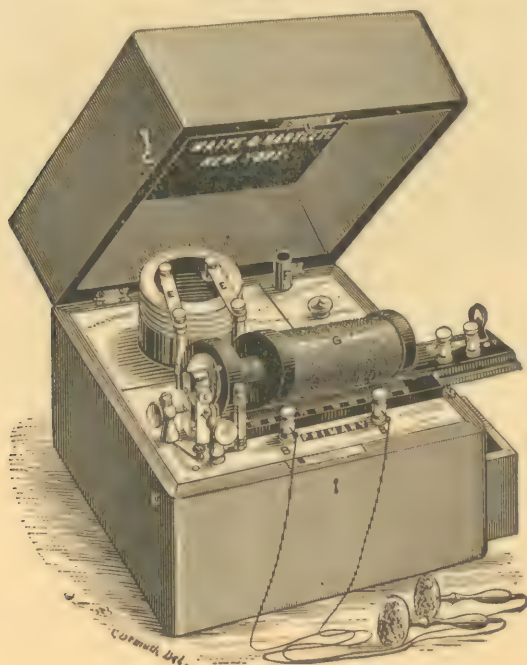
Family Battery.

PRICE, INCLUDING CORDS AND HANDLES, \$10.00.

This Battery is made in Solid Oak or Mahogany Case, and the workmanship of this, as well as of all our Batteries, is of the highest order. For durability and cheapness it has no superior.

No. 2 Physician's Faradic Battery.

No. 23.



PRICE, \$20.00.

This is one of the most complete Batteries for medical use made in portable form. It has two interrupters, fine and coarse, also single contact key for testing muscles or groups of muscles. The cell of the Battery is made perfectly water-tight, so that the solution can be carried therein without any danger whatever of spilling. The advantages it gives are found in no other instrument, and it needs only to be seen to be appreciated.

No. 24.



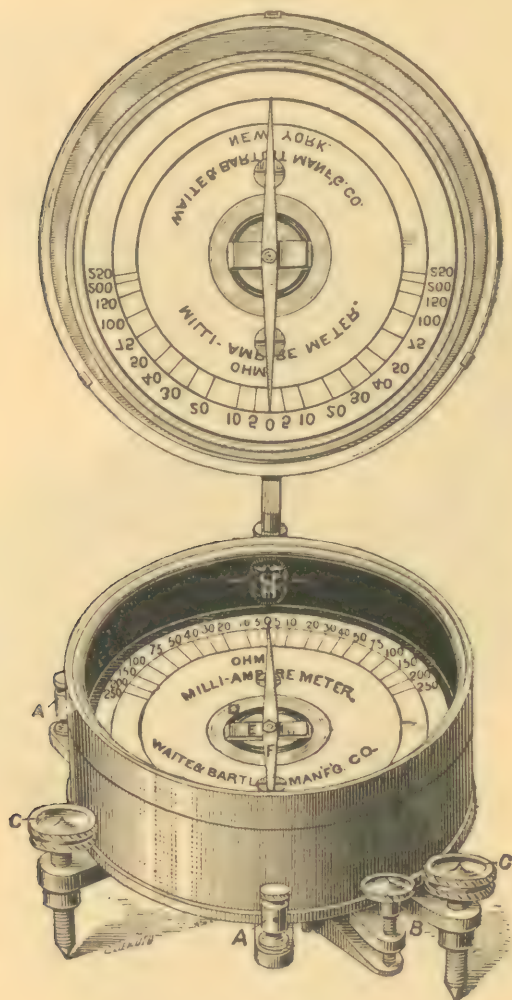
No. 3 PHYSICIANS' FARADIC BATTERY.

Price, \$27.00.

This is of the same construction as No. 2, with the addition of a very fine rheotome, that allows of a wide range of slow interruptions.

No. 3 MILLI-AMPERE METER.

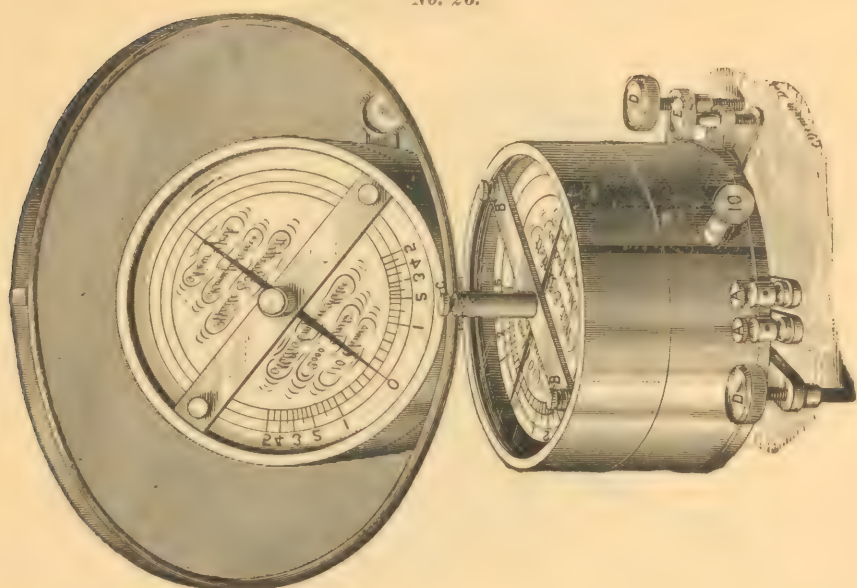
No. 25.



Price, \$27.00.

This instrument is an improvement on our No. 2. The needle is so arranged that it swings in a block of copper and which has the effect of reducing the number of vibrations of the needle making it quite dead beat. This is a great advantage in treatment of nervous diseases.

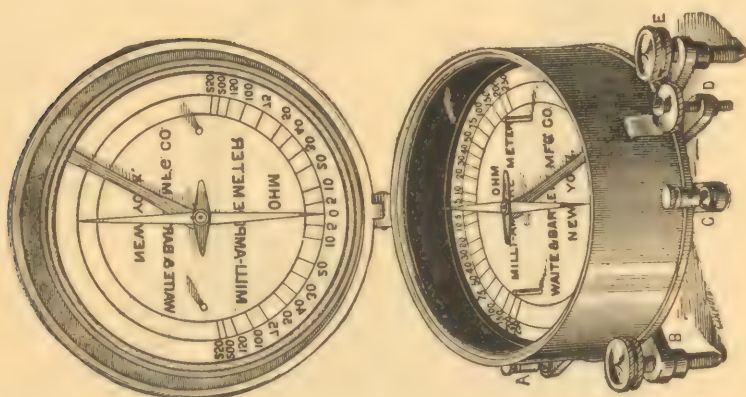
No. 26.



No. 1. MILLI-AMPERE-METER.

Handsome, all-metal case. Measures from 0 to 500, M. A. \$32.00

No. 27.

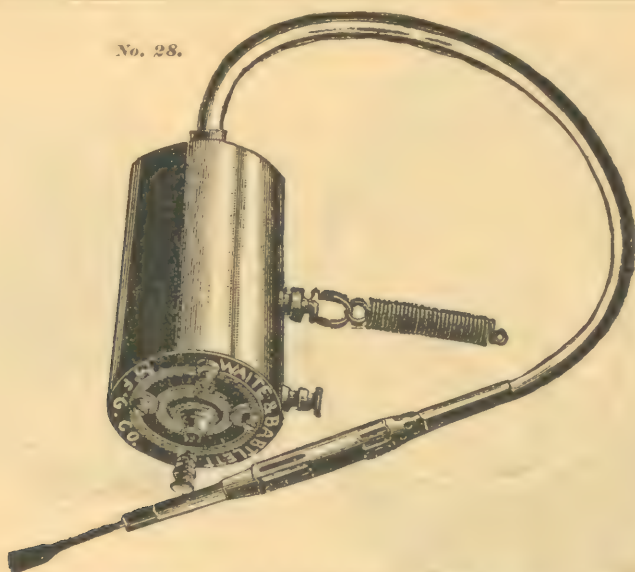


No. 2. MILLI-AMPERE-METER.

Measures for 1 to 250, M. A. \$20.00

Price for Reflecting Mirror as above, \$1.00 extra.

No. 28.



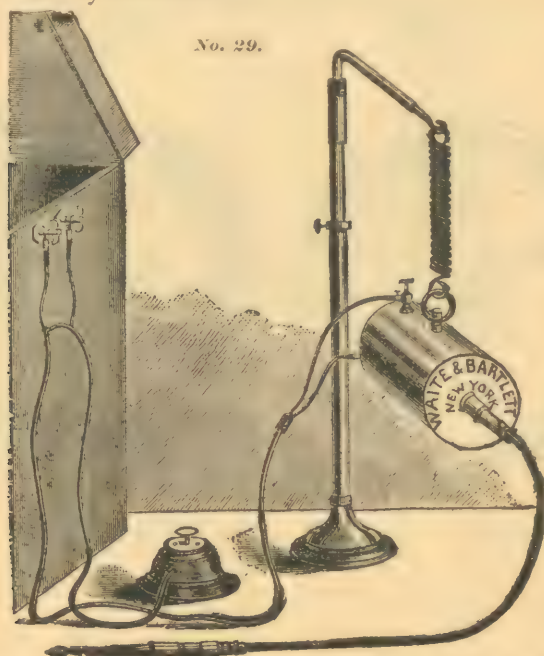
NASAL ELECTRIC MOTOR.

As suggested by H. Holbrook Curtis, M. D.

This Motor has no dead point and starts from any position of rest.

PRICE, complete, of Motor, Hand-piece, Cable and Floor Push.....	\$50.00
“ Stand for Motor.....	10.00
“ Storage Battery for Motor.....	\$80.00

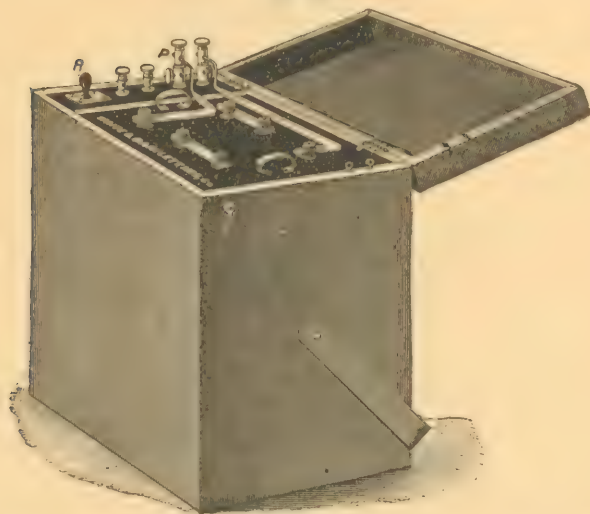
No. 29.



Above cut shows our Nasal Motor with flexible shaft and hand piece, stand and floor push.

STORAGE BATTERIES.

No. 30.



This engraving represents a new and improved form of Storage Battery of three cells for cautery and electric light purposes. The storing power is furnished by gravity batteries, 6 x 8 inches, which can be placed in a closet or cellar.

About twenty-four hours is sufficient time to thoroughly charge the Battery. For cautery it will meet any requirement, and by means of a rheostat which is provided, the current may be increased or diminished at pleasure.

One charge will hold a two-candle power lamp in a state of incandescence for ten hours. *The battery does not deteriorate when idle.* When through using, the wires connecting with the gravity batteries can be attached, thus keeping the storage cells charged to their full capacity.

Furnished in antique oak or mahogany cases, complete, with Rheostat. Full and complete instructions sent with each Battery.

Price of One Celled Battery, complete, with four Gravity Charging Batteries.....	\$48 00
Price of Two Celled, complete, with Charging Cells.....	75 00
Price of Three Celled, complete, with Charging Cells.....	80 00

One Cell suitable for all light nose and throat, eye and ear work. Two Cells suitable for same, platinum loop, and all light operations requiring use of motor. Three Cells suitable for all general and special surgical work, running electric motor, Bone Sawing, etc.

"CROW FOOT" GRAVITY BATTERY.

No. 31.



SIZES.	MAIN 5 x 7 inches.	LOCAL 6 x 8 inches.
Cell, complete.....	\$0 60	\$0 75
Jar.....	25	30
Zinc, with Connector.....	25	35
Copper.....	11	12

*WATER MOTOR FOR DRIVING STATIC MACHINE, DENTAL
DRILLS, &C.*

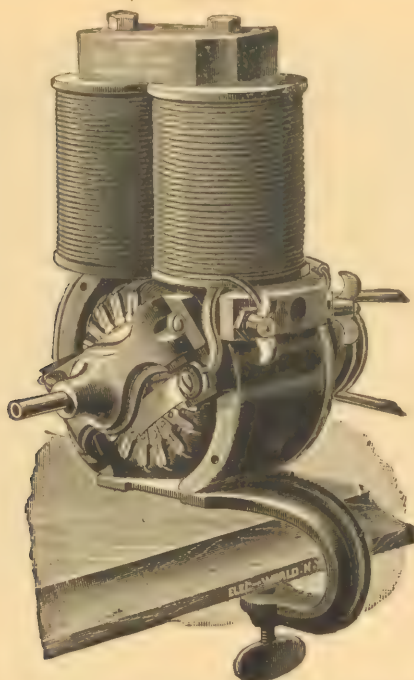
No. 32.



Price, \$15 to \$100 for sizes up to one Horse Power. Pressure of water determines size of motor to be used.

In writing for further information, state pressure of water and power required.

No. 33.



$\frac{1}{8}$ HORSE-POWER MOTOR.

For running Static Machine or Dental Engine.

Price, \$27.00.

												
Nos. 34,	35,	36,	37,	38,	39,	40,	41,	42,	43,	44,	45,	46.
CONICAL BURRS, OR DRILLS.					CURTIS TREPHINES.					PROTECTING SHEATHS, FOR FOREGOING.		
Each.....\$2.00.					Each.....\$2.00.					Each... ..\$4.00.		

No. 47.



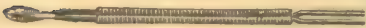
No. 48.



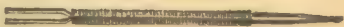
No. 49.



No. 50.



No. 51.



No. 52.



ELECTRODES AND COMBINATION HANDLE.....\$20 00

No. 53.

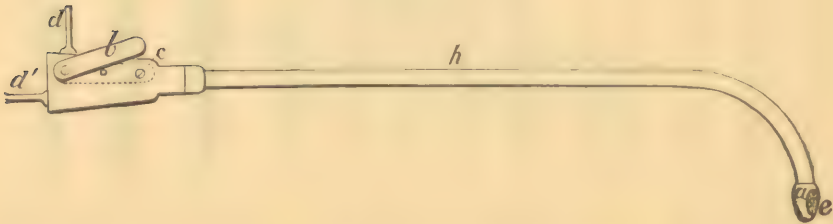


SMALL KNIFE HANDLE.....\$3 50

BURNERS, each.....1 50

SNARE HANDLE AND LOOP.....12 00

No. 54.



NEWMAN'S CAUTERY ELECTRODE, for enlarged Prostate \$13 33

No. 55.

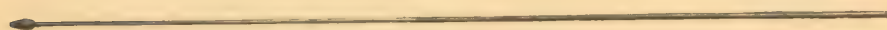


Dr. ROBT NEWMAN'S CURVED SOUNDS, in Case, No. 11 to 28.....\$20.00

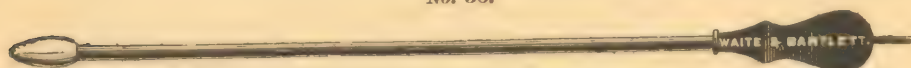
No. 56.



No. 57.



No. 58.



Dr. ROBT NEWMAN'S SOUNDS FOR ELECTROLYSIS OF STRICTURE.

Price of Curved, each.....\$2 00 | Straight, each.....\$1.50

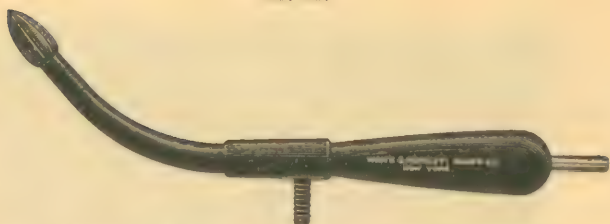
All Finished in Polished Hard Rubber.

No. 59.



NEWMAN'S TUNNELLED CATHETER ELECTRODE.....\$5.00

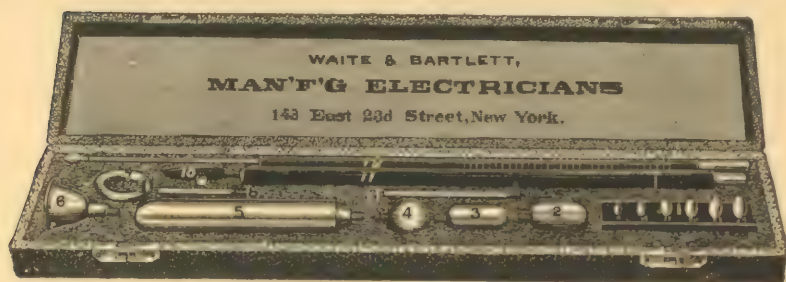
No. 60.



DR. KING'S RECTAL ELECTRODE, arranged so that an injection of a solution of Chloride of Sodium can be used, the current being distributed by the solution used for constipation or paralysis of Rectum.

PRICE, \$5.33.

No. 61.



COMBINATION GYNECOLOGICAL SET.

The above set comprises instruments devised and used by Drs. P. F. Munde, T. G. Thomas, and A. D. Rockwell, of New York City, and Dr. Henry Fry, of Washington, D. C.

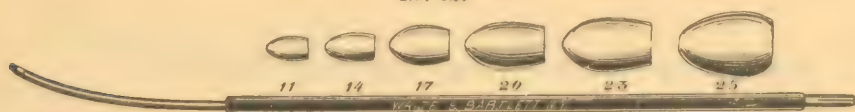
The Electrodes are useful in the treatment of stenosis, endometritis, ovaritis, chronic pelvic cellulitis, proclentia, displacements, and relaxed conditions of the vaginal walls.

The advantages of this set are that all the attachments fit universal handles. The Fry Stenosis set has interchangeable tips from No. 11 to No. 28, French scale. The stenosis sound is flexible a distance of four inches, to allow for the various curves of the uterine canal, the remainder of the handle being rigid. It thus gives the operator a superior control of the electrode.

The vaginal electrode, ovarian ball point, uterine cup and needle holder, are all interchangeable on a rigid handle of extra length, thus making it a very effective and convenient uterine set.

PRICE, \$13.33.

No. 62.



DR. FRY'S INTRA UTERINE ELECTRODE FOR STENOSIS.

Price.....4 00 | In Case.....\$6 00

No. 64.



APOSTOLI'S BIPOLAR VAGINAL ELECTRODE FOR FARADIC CURRENT.

PRICE.....\$4 00

No. 65.



APOSTOLI'S BIPOLAR INTRA-UTERINE ELECTRODE FOR FARADIC CURRENT.

PRICE.....\$4 00

No. 66.



APOSTOLI'S PLATINUM ELECTRODE FOR GALVANO-PUNCTURE AND INTRA-UTERINE USE, IN ELECTROLYSIS OF FIBROID AND CYSTIC TUMORS.

PRICE.....\$28 00

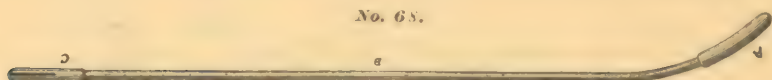
No. 67.



WAITE & BARTLETT MFG. CO.

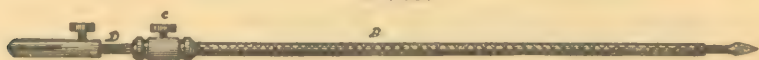
PRICE, \$5.50.

No. 68.



GOELET'S INTRA-UTERINE ELECTRODE.....\$2 00

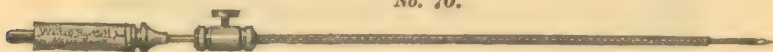
No. 69.



GOELET UTERINE PUNCTURE NEEDLE.

RUBBER COVERED, WITH MEASURING SHIELD.....\$7 50

No. 70.



GOELET'S CANNULA ELECTRODE.

With Silver Cannula and Platinum Trocar and adjustable Sheath, \$7 50

No. 71.



FLEXIBLE, PLATINUM POINTED, INTRA-UTERINE ELECTRODE, Price, \$5 33

No. 72.



No. 73.



No. 74.



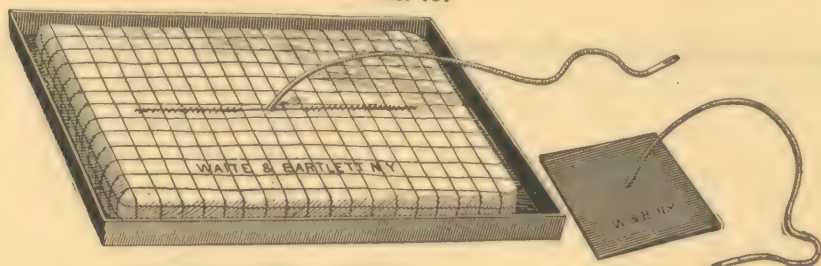
PLATINUM POINTED NEEDLES, HARD RUBBER INSULATION.

For Electrolysis of Fibroid Tumors, Straight and Curved Spear Points and Trocar Pointed.

Price, each,.....\$5 33

Steel Pointed, each.....\$2 00

No. 75.



APOSTOLI'S ABDOMINAL CLAY ELECTRODES,

COMPLETE WITH ZINC TRAY, AS SHOWN.....\$3 00

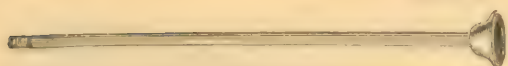
No. 76.



GOELET'S CLAY ELECTRODE.

Soft Rubber Back and Absorbent Cotton on Face of Clay. Complete, \$3 00

No. 77.



No. 78.



CUP SHAPE ELECTRODE, for Os Uteri.....\$2 00

No. 79



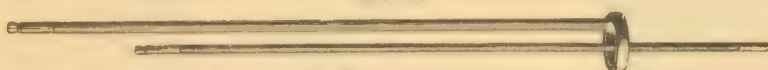
BEARD & ROCKWELL'S INTRA-UTERINE ELECTRODE.....\$2 00

No. 80.



VAGINAL ELECTRODE.....\$1 50

No. 81.



IMPROVED INTRA-UTERINE ELECTRODE. For localizing the current in the Uterus.....\$2 50

No. 82.



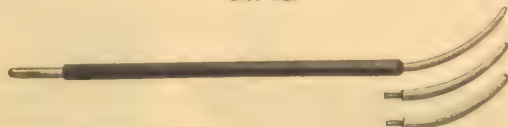
UTERINE ELECTRODE, for treating the ovaries.....\$2 00
As used by Drs. Thomas and Mundé.

No. 83.



METAL TIPPED HARD RUBBER ELECTRODE, for Vagina.....\$2 00

No. 84.



GOELET'S INTRA-UTERINE, 3 Stems.....\$3 00

No. 85.



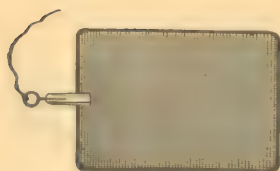
GOELET'S CLAY VAGINAL ELECTRODE.....\$2 00

No. 86.



DR. GUNNING'S FLEXIBLE DOUBLE CURRENT INTRA-UTERINE ELECTRODE.....\$4 00

No. 87.



No. 88.



FLEXIBLE GAUZE ELECTRODES.

PRICE OF 2X 3	.....	\$0 32
" 1 2X 8	.....	0 48
" 3X 4	.....	0 40
" 3X 5	.....	0 48
" 4X 5	.....	0 50
" 5X 7	.....	0 70
" 6X 6	.....	0 80
" 6X 8	.....	0 90
" 6X 12	.....	1 00
" 8X 12	.....	1 20

No. 89.



GEORGE J. ENGLEMAN'S

PUNK ELECTRODE.

Price, 6x8.....\$4.00

No. 90.



SPONGE COVERED DISC.

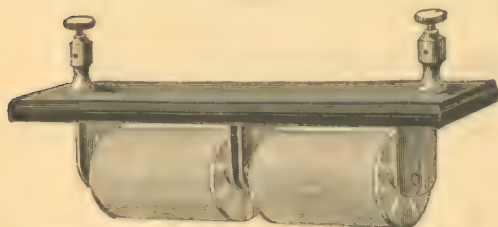
Price, per pair \$0 75.

No. 91.

UNIVERSAL HANDLE.

Price, per pair, \$0 75.

No. 92.



PIFFARD'S ROLLING RHEOPHORE.

As used by Dermatologists in Skin Excitation.

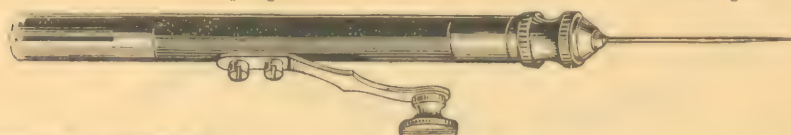
Price.....\$2 50.



WRISTLET ELECTRODE.

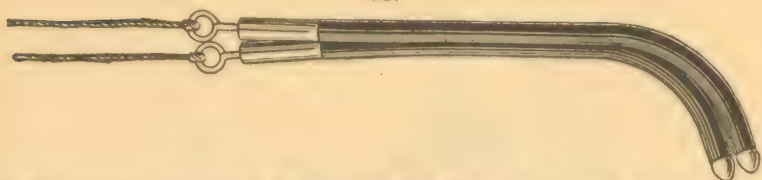
For Rubbing, Massage and Digital Diagnosis.

Price.....\$1 50.



NEEDLE HOLDER, with or without Contact,.....\$2 00

93.



King's Double Current Eye Electrode, for Blepharitis and Trachoma \$2 66

94.



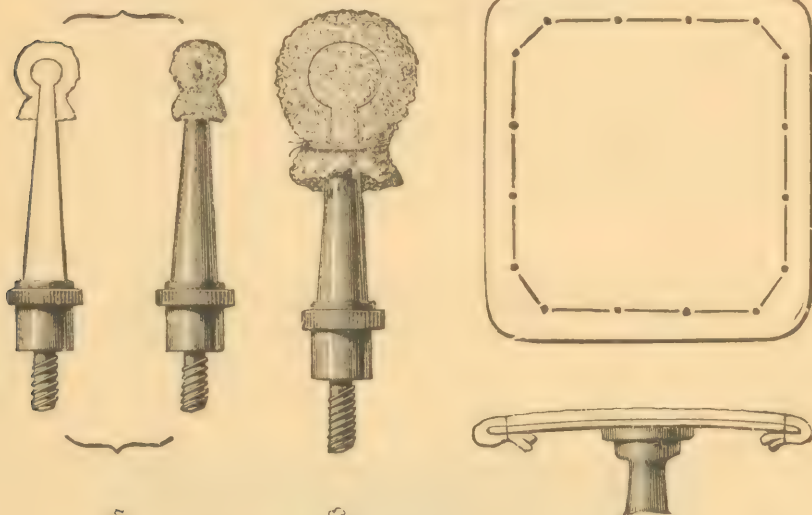
King's Nasal Electrode, for Hypertrophic and Atrophic Catarrh... \$1 50

97.

96.

97.

98.



VARIOUS ELECTRODES. (AFTER ERB.)

Price, Small.....\$0 75 | Price, Large Size.....\$1 50

The Above are full Size.

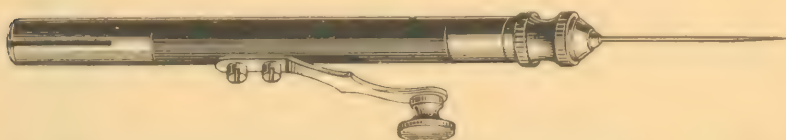
See New York Medical Journal, July 27th, 1885,

99.

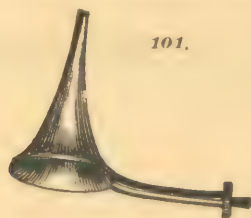


Rectal Electrode.....\$1 50

100.

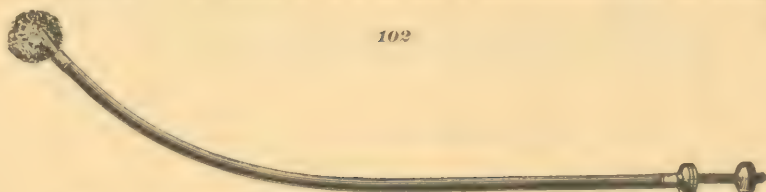


Needle Holder.....\$2 00



101.

Ear Electrode... ..\$2 50



102

Universal Electrode, for Throat... ..\$2 32



103.

Nasal Electrode... ..\$1 50



104.

Tongue Plate... ..\$1 50



105.

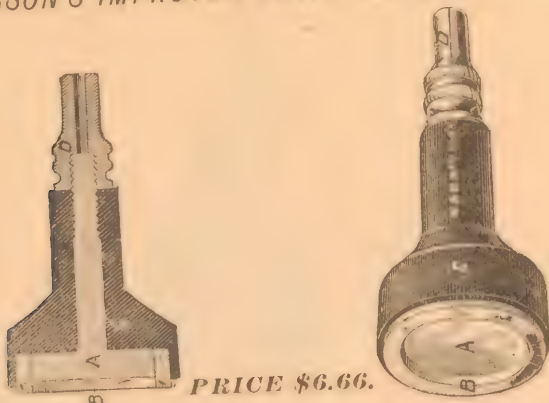
Small Lamp as shown, or with flexible handle\$3 00



106.

Tongue Depressor with electric light\$5 00

THE CATAPHORIC ELECTRODE, PETERSON'S IMPROVED CATAPHORIC ELECTRODE,



PRICE \$6.66.

This cut illustrates the new electrode. A is a disc, made of metal that will not oxidize. The stem which passes through the hard rubber cover C is held in place by nut D. It also holds the tip for connecting with the battery. B is a soft rubber ring, which is held in place by A, and at the same time it insulates the skin from A, allowing the current to pass from A to the skin of the patient through the medicated paper contained in the cavity formed by A and B. This electrode is far superior to the old one.

The following is condensed from the article by Dr. Frederick Peterson, of the College of Physicians and Surgeons, entitled, "Electric Cataphoresis as a Therapeutic Measure," in the New York Medical Journal, of April 27th, 1889.

There is a streaming movement of fluids or semi-solid substances, which are in the path of a galvanic current, and such movement is from the Anode to the Kathode, or in the same direction as the current. It seems in a manner to carry substances with it, just as a stream washes floating substances along its course.

Hence drugs may be introduced into the system through the skin by placing them in solution in the path of the galvanic current, which means of course, between the anode and the skin. Solutions of quinine, morphine, strychnine, chloride of potassium, tincture of aconite, aconitia, cocaine, chloroform, etc., may be placed upon or within a properly constructed cataphoric electrode, (making it the anode or positive pole) and transmitted through the skin in a few minutes.

Dr. Peterson reports in detail some thirty-one out of one hundred experiments he made with this method.

He employed it chiefly to produce local anaesthesia for small operations, and for the relief of neuralgia of superficial nerves, and reported some astonishing results.

If cocaine be used, it should be a ten or even twenty per cent. solution. It is placed on the simple cataphoric electrode devised by Dr. Peterson and applied to the painful nerve, to the spot to be operated upon. Having made it the positive pole the current is turned on. From 10 to 15 cells may be used, current strength of five or even fifteen Milli-Amperes, and for from five to ten minutes.

In fact it is not necessary to measure the current. A perceptible current is used for a short time, and an imperceptible for a longer period. Cataphoresis is indicated for cutaneous operations, neuralgia, etc., (and then cocaine should be used), and in the local applications of iodine or its compounds to tumors or swellings.

Dr. Peterson also devised a more perfect cataphoric electrode, described in his paper in that it permits of exact dosage. In other respects it is not as efficient as the simple one figured in our illustration. This mode of employing electricity is gaining wide repute and application every day.

In the New York Medical Journal, November 15th, 1890, Dr. Peterson has a note on a new and perfectly simple method of exact dosage of drugs used with the anode. For this purpose he had made by us a particular form of cataphoric electrode, which we call the *Exact Dosage Electrode*. Boedicker, the pharmacist at 954 Sixth Ave., manufactures medicated cataphoric discs to be used with this electrode. These discs are charged with certain quantities of various alkaloids and other drugs.

No. 108.



Price, \$8.00

The above cut illustrates a switch as devised by A. de Watteville, M.D. of London, of which a sketch and description is given on page 96 of his work on Medical Electricity, published in 1884. The pole changer we have changed, using one of our own adoption, but the original principal remains the same. On the side marked G, there are two binding posts, one marked plus, the other marked minus. This is for the purpose of fastening the cords or wires from the galvanic battery, positive wire and binding post marked plus, negative wire and binding post marked minus. On the side with the letter F, are 2 more binding posts, that are for the purpose of connecting the cords from the secondary coil of the Faradic battery. You can now have both instruments in operation at the same time. The conducting cords that connect at the other end, have switches. The pole changer has plus mark, as indicated by an arrow. These posts are for the conducting cords. Whichever post the arrow points to, that post is the positive pole. The other switch has 3 contacts, 1, 2, 3. When the switch is thrown over so that it makes the contact, 1 and 2, you have the galvanic current. When thrown in the opposite direction so that you have the levers resting on 2 and 3, you have the Faradic current. On 1 and 3 combined, galvanic and faradic current. This switch enables you to change from one current to the other, without changing cords or electrodes, which is a great convenience.

No. 109.



INTERRUPTING HANDLE.

Wood.....	\$1.50	Hard Rubber.....	\$2.00
<i>As used by Dermatologists in Skin Excitation.</i>		<i>For Rubbing, Massage and Digital Diagnosis.</i>	
PRICE.....	\$2.50	PRICE.....	\$1.50

No. 110.



FLEXIBLE ELECTRODE.

PRICE.....\$1.50

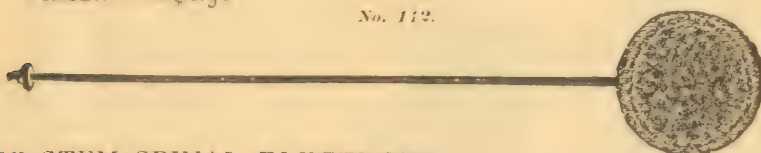
No. 111.



GROOVED VAGINAL ELECTRODE.

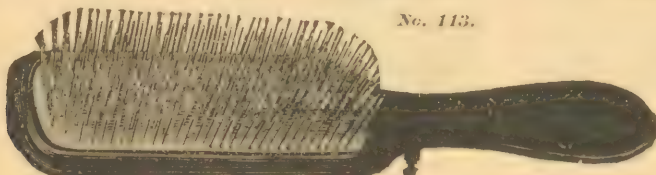
PRICE.....\$1.50

No. 112.



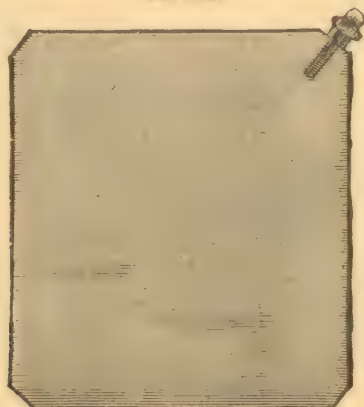
LONG STEM SPINAL ELECTRODE.....\$2.00

No. 113.



BRUSH ELECTRODE.....\$2.00

No. 114.



METAL FOOT PLATE.....\$1.50

NOTICE.—In ordering always designate the batteries or parts desired by the names below.

No. 115.



AXO BATTERY.

Cell complete	\$1 00
Porous Cup alone	75
Glass Jar.....	15
Zinc	8
Sal Am. in bag.....	6
Cell Complete, hermetically sealed	\$1 10

"Axo" Battery Complete. "Axo" Porous Cup.
With Jar adapted for Sealing.

No. 116.



"GONDA" BATTERY.

Cell Complete.....	\$1 00
Gondas, per pair, with rubber bands.....	60
Carbon Mounted Complete,	15
Glass Jar.....	15
Glass Jar Cover.....	8
Zinc.....	8
Sal Am. in bag.....	6
Rubber Bands per pair.....	4

"Gonda" Battery Complete.

Gondas, Carbon,
Zinc and Jar Cover.

No. 117.



"GONDA POROUS CUP" BATTERY.

Cell Complete.....	\$0 75
Porous Cup alone.....	60
Glass Jar.....	15
Zinc.. ..	8
Sal Am. in bag.....	6

DISCOUNT 15 PER CENT.

Genuine "Gonda Porous cup" Battery Complete Genuine Gonda Porous Cup and Zinc.

HENRY J. GREEN, CLINICAL THERMOMETERS.

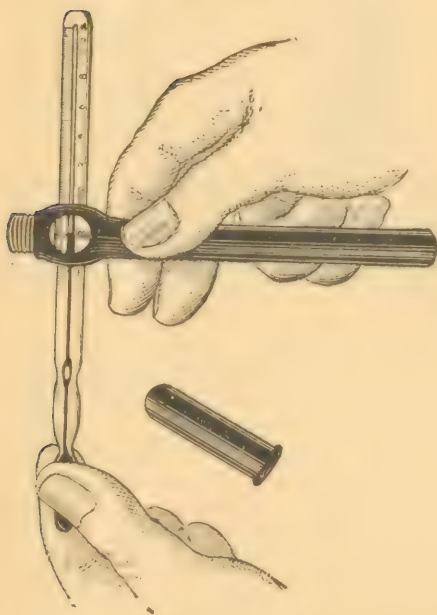
My studies on original thermometry and the extreme precision I have attained in the construction of Normal Mercurial Standards, to which clinical and other thermometers are referred when it is desired to know their errors and obtain a scale of corrections, enable me to offer an exceptionally accurate clinical thermometer.

The tubes are well seasoned. The principle of registration is that commonly known as "indestructible index." (Invented by J. Green, described in Appleton's Encyclopedia, first edition, article Thermometer, page 431.)

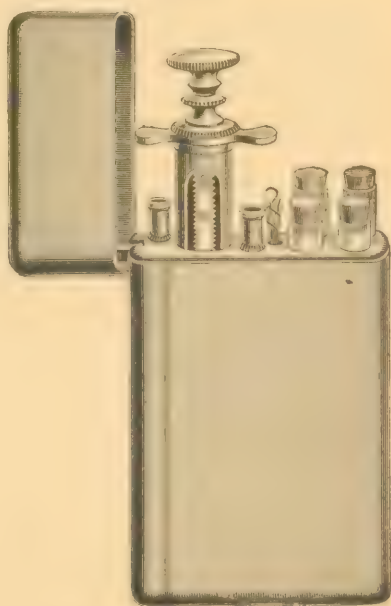
Each thermometer is compared with my standard and a list of its corrections, if any, is furnished in certificate form.

Price, (No. 118,) either 4, 5, or 6 inches long, in hard rubber case, \$2.50.

No. 118.



No. 119.



The above cut (119) represents a very neat, complete and effective Hypodermic Syringe in fine nickle case, with spring cover. Needles screw into the case, with four vials for tablets. This is the most compact and neatest case in market.

PRICE, \$3.00.

GOELET'S SPECULUM.

No. 120.



The speculum.



The elevator for the anterior vaginal wall.

The above cut shows a very ingenious modification of the Sim's Speculum by Dr. Goelet which is especially adapted to the wants of the general practitioner because it possesses in the one instrument all the advantages of the Sim's as well as the bivalve or trivalve instruments and many more. It may be used with equal facility with the patient either in the dorsal or lateral positions, and is self-retaining in both positions.

"It consists of two Sim's blades, of different sizes, joined together in opposite directions by a short thick shank where the greatest weight of the whole instrument is concentrated, and the blades are made thin and light so as not to gravitate when in position. This arrangement places the greatest weight close to the perineum, and in consequence there is no weight or strain on the blade which is inserted when the support of the hand is removed, and it is self-retaining.

The cut shows the position of the hand in holding the speculum when it is desired to retract the perineum, which is necessary to obtain a perfect view of the cervix. The thumb is the fulcrum and the power is exerted in a downward and backward direction by two or three fingers near the shank. The resistance to be overcome (the perineum) is at the point where the letter **R** is placed.

The elevator is made of flat hard rubber **S** shaped, and is shown in its profile view in the cut. It is so curved as to fit up over the pubis, has rounded edges, and, being elastic, causes no inconvenience to the patient. Traction is made in an upward and outward direction either by the physician, a nurse or the patient herself. It is to be used only for the dorsal posture to hold up the anterior vaginal wall when it prolapses and obstructs the view.

It is by no means a necessary accompaniment of the speculum, though sometimes it proves a great convenience. The convenience of transportation afforded by the size of the speculum is by no means small advantage."

No. 121.

STRATTON'S ADJUSTABLE ILLUMINATOR.

The above cut represents a very convenient condenser that can be carried in the instrument bag to the patient's house, and will be found of great value in making examinations at the bed side, in cases of throat or nasal trouble, or other cavities of the body. This is a very complete apparatus, and its low price and effectiveness will make it a great favorite among the general practitioners. The prices are \$2.00 and \$2.50 net. Those for \$2.50 have a nickel-plated stand and slate base. The others have case iron Japanned bases, also have attachments for gas brackets.

*The following are the Names of a few of the
Physicians using our Cabinets.*

-
- O. Lockwood, M. D., 29 W. 36th St., N. Y.
 U. S. Marine Hospital, New Brighton, S. I.
 H. H. Curtis, M. D., 29 W. 20th St., N. Y.
 T. M. Blogget, M. D. 33d St. & B'way, N. Y.
 H. J. Walker, M. D., 8 E. 30th St., N. Y.
 Dr. F. W. Olds, 53 W. 38th St., N. Y.
 J. R. Nilson, M. D., 9 E. 53d St., N. Y.
 N. Y. Infirmary, 5 Livingston Place, N. Y.
 C. E. Fisher, M. D., Austin, Texas.
 D. V. Dean, M. D., Grand Ave. & Olive
 St., St. Louis, Mo.
 E. Van De Warker, M. D., Syracuse, N. Y.
 C. E. Riggs, M. D., St. Paul, Minn.
 Drs. A. C. & L. R. Wass, Minneapolis,
 Minn.
 N. S. Lincoln, M. D., 1514 H St., N. W.
 Washington, D. C.
 Z. T. Sowers, M. D., 1320 New York Ave.,
 Washington, D. C.
 D. Webster Prentiss, M. D., 1101 14th St.,
 Washington, D. C.
 E. G. Zinke, M. D., Cincinnati, Ohio.
 A. C. Kemper, M. D., Cincinnati, Ohio.
 G. B. Orr, M. D., Cincinnati, Ohio.
 J. C. Dillon, M. D., Knightstown, Ind.
 Drs. Maury & Mitchell, Memphis, Tenn.
 Frank H. Gardener, 1016 14th St., N. W.
 Washington, D. C.
 J. Taber Johnson, M. D., 1728 K St., N. W.
 Washington, D. C.
 W. M. Mew, M. D., 928 N. Y. Ave., N. W.,
 Washington, D. C.
 Charles E. Hagner, M. D., 1507 H. St., N.
 W., Washington, D. C.
 L. Nicholson, M. D., 604 12th St., N. W.,
 Washington, D. C.
 Prof. J. H. Scarff, 529 N. Charles St.,
 Baltimore, M. D.
 James Dillingslea, M. D., 15 W. Saratoga
 St., Baltimore, Md.
 C. L. Buddenbohn, M. D., 418 S. Paca S.,
 Baltimore, Md.
 J. W. Putnam, M. D., Buffalo, N. Y.
 J. N. Crocker, M. D., Broadway, Cam-
 bridge, Mass.
 S. V. Goldwaite, M. D., Concord Sq., Bos-
 ton, Mass.
 R. E. Bell, M. D., Lowell, Mass.
 J. V. Shoemaker, M. D., Philadelphia, Pa.
 W. H. Warden, M. D., Philadelphia, Pa.
 A. Graydon, M. D., Philadelphia, Pa.
 E. E. Montgomery, M. D., Philadelphia,
 Pa.
 Dr. Hunter McGuire, 315 E. Grace St.,
 Richmond, Va.,
 Dr. Saunders, 126 E. 82d St., N. Y. C.
 Dr. Vineburg, 167 E. 61st St., N. Y.
 Dr. A. H. Brown, 7 William St., Auburn,
 N. Y.
 Dr. Sherman, 325 9th St., Brooklyn, N. Y.
 Dr. Evan O. Kane, Kane, Pa.
 Dr. A. Eggers, Sioux City, Ia.
 Dr. E. Lane, Scofield, Chambersburg, Pa.
 Dr. F. Krug, 13 E. 41st N. Y.
 Dr. W. W. Haberton, 36 S. Ludlow St.,
 Dayton, Ohio.
 Dr. N. H. Williams, Jackson, Mich.
 Dr. J. B. Cornell, 192a 6th Ave., Brooklyn,
 N. Y.
 Dr. L. L. Knapp, New Richmond, Wis.
 Dr. T. Englebach, New Orleans, La.
 Dr. C. S. Grant, Saratoga Sanitarium,
 Saratoga Springs, N. Y.
 Dr. Hugh Hogan, Atlanta, Ga.
 Dr. L. D. Meltz, 206½ Ontario St., Clevel-
 and, Ohio.
 Dr. Dana, 50 W. 46th St., N. Y.
 Dr. Grandin, 36 E. 58th St., N. Y.
 Dr. Robert Newman, 68 W. 36th St., N. Y.

- E. Lane Schofield, M. D., Wiconisco, Pa.
 W. J. Mortimer, M. D., 612 Lexington Ave., N. Y.
 Laura Franklyn Hospital, 111th St., and 6th Ave., N. Y.
 J. F. C'Conor, M. D., 19 W. 46th St., N. Y.
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 W. H. Rogers, M.D., 225 W. 22d St., N. Y.
 German Dispensary, 9th St., and 2d Ave., N. Y.
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 C. F. Osman, M. D., Dorchester St., Boston, Mass.
 H. B. Carpenter, M. D., Union Park St., Boston, Mass.
 F. H. Wallace, M. D., Temple Place, Boston, Mass.
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 N. E. Hospital, Boston Highlands, Mass.
 R. Reyburn, M. D., 714 13th St., N. W., Washington, D. C.
 G. L. Magruder, M. D., 815 Vermont Ave., N. W., Washington, D. C.
 R. Walsh, M. D., 1328 N. Y. Ave., N. W., Washington, D. C.
 H. Crook, M. D., 508 13th St., N. W., Washington, D. C.
 J. F. Thompson, M.D., 804 17th St., N. W., Washington, D. C.
 W. W. Johnston, M. D., 1603 K St., N. W., Washington, D. C.
 F. E. Fooks, M.D., 1519 E. Baltimore St., Baltimore, Md.
 G. G. Rusk, M. D., Baltimore and Washington Sts., Baltimore, Md.
 Theo Cooke, M. D., 914 N. Charles St., Baltimore, Md.
 Prof. T. Opie, M. D., 600 N. Howard St., Baltimore, Md.
 H. C. Lawyer, M. D., 7 Hill St., San Francisco, Cal.
 Dr. Mansfield, Chillicothe, Mo.
 G. E. Bill, M. D., Waltham, Mass.
 J. E. Carland, M. D., Gloucester, Mass.
 T. I. Fisher, M. D., Tewksbury, Mass.
 F. H. Morse, M. D., Me'rose, Mass.
 L. Wass, M. D., Minneapolis, Minn.
 Jay Owens, M. D., Odd Fellows' Block, St. Paul, Minn.
 LeGrand S. Denslow, M. D., St. Paul, Minn.
 Charity Hospital, New Orleans, La.
 Drs. Long & Riggs, Bryan, Ohio.
 W. Woodman, M. D., Portland, Me.
 A. W. Herzog, M. D., Hoboken, N. J.

SOME OF THE PHYSICIANS USING OUR MEDICAL HOLTZ MACHINE.

(As Improved by Prof. A. L. RANNEY, M. D.)

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Prof. W. A. Hammond, M. D., Washington, D. C.

Prof. H. S. Morton, M. D., 36 W. 56th St., N. Y.

G. M. Hammond, M. D., 54 W. 45th St., N. Y.

F. B. Carpenter, M. D., 224 E. 20th St., N. Y.

H. H. Curtis, M. D., 30th St. and Madison Ave., N. Y.

A. P. DeFoulk, M. D., 220 E. 17th St., N. Y.

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C. H. Yelvington, M. D. Susquehanna, Pa.

A. W. K. Andrews, M. D., Binghamton, N. Y.

Smith Baker, M. D., Utica, N. Y.

E. Tresler, M. D., Orange, N. J.

Thos. Gardiner, M. D., Minneapolis, Minn.

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Rush Leaman, M. D., Philadelphia, Pa.

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Alma Sanitarium, Alma, Mich.

Dr. Nicholson, 604 12th St., Washington, D. C.

I. C. Rosse, M. D., 1730 H St., Washington, D. C.

R. Reyburn, M. D., 614 15th St., N. W., Washington, D. C.

F. H. Gardner, M. D., 1016 14th St., N. W. Washington, D. C.

J. H. Crocker, M. D., 322 B'way, Cambridge, Mass.

H. P. Jefferson, M. D., Lowell, Mass.

W. Woodman, M. D., Portland, Maine.

F. H. Wallace, M. D. Temple Place, Boston, Mass.

H. B. Otis, M. D., Worcester, Mass.

G. C. Clement, M. D., Haverhill, Mass.

W. T. Goodale, M. D., Saco, Maine.

Truman Martin, M. D., Buffalo, N. Y.

J. W. Putnam, M. D., Buffalo, N. Y.

S. N. Brayton, M. D., Buffalo, N. Y.

Thomas L. Shearer, M. D., 345 W. Charles St., Baltimore, Md.

James Dillingslea, M. D., 15 W. Saratoga St., Baltimore, Md.

C. Heyer, M. D., 910 N. St., St. Louis, Mo.

P. Zenner, M. D., Cincinnati, Ohio.

J. P. Geppert, M. D., Cincinnati, Ohio.

M. B. Werner, M. D., Philadelphia, Pa.

Dr. Robinson, 214 State St., Albany, N. Y.

Drs. Long & Riggs, Bryan, Ohio.

Dr. J. H. Franke, Chasca, Minn.

Dr. W. B. Fletcher, Indianapolis, Ind.

Dr. E. D. Leffingwell, Watkins, N. Y.

Dr. J. E. S. Gray, St. Clair Springs, Mich.

Prof. Palmer, M. D., Chicago, Ill.

Dr. Dean, St. Louis, Mo.

Dr. G. F. Hurlbert, St. Louis, Mo.

TESTIMONIALS.

43 WEST FIFTY-FOURTH STREET,

New York, April 28, 1886.

I have used for nearly a year one of WAITE & BARTLETT'S Statical Electrical Machines and find it to be entirely satisfactory in every respect. It keeps its charge in all kinds of weather and gives a large and intense spark.

WILLIAM A. HAMMOND, M. D.

156 MADISON AVENUE,

New York, March 29, 1886.

WAITE & BARTLETT:

DEAR SIR:—I cheerfully testify to the convenience, durability and general excellence of your electrical apparatus designed for medical purposes.

Your reputation as expert practical electricians in telephonic and telegraphic work has been fully sustained in this new department of electrical manufacture. The Mechanical work which you have performed under my guidance has been eminently satisfactory to me.

Respectfully yours,

A. L. RANNEY, M. D.

Prof. of Anatomy and Physiology of the Nervous System

in the N. Y. Post-Grad. Medical School and Hospital;

Prof. of Nervous and Mental Diseases in the Med. Dep.

of the University of Vermont.

20 WEST 45TH STREET,

April 2, 1886.

WAITE & BARTLETT:

GENTLEMEN:—In regard to the electrical apparatus which you have furnished me, I take pleasure in saying that both the 36 cell portable galvanic battery, and the large combination cabinet battery, (faradic and galvanic) have given me perfect satisfaction, both having been in almost daily use for nearly a year, and never having failed me, as so many batteries are liable to do. I can thoroughly recommend them. The sponges, and intra-vaginal, uterine and rectal electrodes which you have made for me have also been extremely useful.

Yours very truly,

PAUL F. MUNDE.

NEW YORK, April 25, 1886.

Mess. WAITE & BARTLETT:

DEAR SIR:—I take pleasure in stating that after examination of various batteries I chose your "Perfected Cabinet" for use in this hospital, and am entirely satisfied with the same.

Very respectfully,

WALTER WYMAN, M. D.

Surgeon in charge U. S. Marine Hospital, New York.

HENRY C. HOUGHTON, M. D., 12 WEST 39TH STREET,

New York, April 7, 1886.

Mess. WAITE & BARTLETT:

I am much pleased with the Gonda Leclanche cells which your house put in for me. For use in Ophthalmic and Aural practice they are superior to any I have used since I had the small Siemens and Halske cells many years ago. I can commend the battery to those who need it for similar uses.

Yours truly,

HENRY C. HOUGHTON, M. D.

WAITE & BARTLETT MFG. CO.

HENRY E. WAITE, M. D.

36 WEST FIFTY-SIXTH STREET,

New York, June 17, 1890.

MY DEAR SIR:—I take great pleasure in expressing to you my opinion that I have found you the best man in N. Y. to go to, to get practical work done in medical electrical appliances. Relating to the Franklinization particularly, your work has been marked by originality in constructive details, and your knowledge of electricity and its practical applications shows itself in most numerous and commendable directions.

Wishing you continued success in the field you have so largely made your own by perseverance and merit, I am,

Very truly yours,

WILLIAM JAMES MORTON, M.D.

OFFICE OF T. S. ROBERTSON, M. D.

28 East 20th Street, New York, April 7, 1886.

Mess. WAITE & BARTLETT:

GENTS:—It gives me great pleasure to state that the different batteries and electrodes you have made for me have in every respect given me entire satisfaction, much better than I have ever received from any other maker. My new cabinet battery is a gem in every particular, your neat dial arrangement being a great improvement on the old table pattern. The active and hearty co-operation you give physicians, on any new suggestion you may receive, deserves from our profession its substantial support. I am, with best wishes,

Faithfully yours,

T. S. ROBERTSON, M. D.

224-230 EAST TWENTIETH STREET,

Mess. WAITE & BARTLETT:

New York, April 5, 1886.

I have used your Batteries and Static Machines for several months both at my clinic and in my office. They are easily kept in order and always ready for use. Your success in placing in the hands of the medical profession reliable electrical apparatus at moderate prices merits their confidence and patronage.

Yours respectfully,

FRANK B. CARPENTER,

Instructor in Dermatology N.Y.P.G. Med. School.

Mess. WAITE & BARTLETT:

MY DEAR SIR:—I take great pleasure in adding to the many testimonials of excellency which the profession have already given of your various electrical instruments.

I have used your instruments for over three years and shall continue as in the past in recommending them to the profession as well as your house as being conscientious, hard working and progressive. Hoping sincerely that you will succeed in all your efforts to be universally appreciated as you most justly deserve. I am, sincerely yours,

CHARLES HENRY BROWN, M. D.

*Instructor in diseases of the Mind and Nervous System and
Medical Electricity of the N. Y. Post Grad. Medical
School and Hospital, 226 East 20th St., N. Y. City.*

DEMILT DISPENSARY, Second Ave., cor 23d St.,

Mess. WAITE & BARTLETT:

New York, April 6, 1886.

GENTLEMEN:—The "Complete Cabinet Battery" made by you for this Institution has now been in daily use for more than a year, and has given perfect satisfaction in every respect. Its manipulation is extremely simple, and the trouble necessary to keep it in order scarcely deserves the name.

Respectfully yours,

AND. J. DARKEN, House Physician.

Mess. WAITE & BARTLETT:

58 West 45th St., New York, Sept. 8, 1886.

DEAR SIR:—For the last two years I have been using your batteries and static machines in both hospital and private practice, and consider them the best that can be obtained. I can particularly recommend your static machines which, for continual action in all weather, and the facility with which they can be charged, are superior to all others.

Yours very truly,

GRAEME M. HAMMOND, M. D.

New York City, Sept. 8, 1886.

Messrs WAITE & BARTLETT have furnished electrical instruments for the use of the Neurological Department of the Post-Graduate School, and have given proofs of much ingenuity and mechanical skill.

C. L. DANA, M. D.

No. 43 EAST FIFTY-NINTH STREET,

Mess. WAITE & BARTLETT:

March 29, 1886

GENTLEMEN:—During the last five years I have used batteries from eight different makers. For the past two years I have used your instruments almost exclusively, and while they are not perfect, because perfection in a battery has not yet been attained by any one, yet I can recommend your work for simplicity, durability and cheapness so far as is consistent with good workmanship.

Very truly yours,

REYNOLD W. WILCOX, M. D.

Mess. WAITE & BARTLETT:

Dr. LANDON CARTER GRAY,

158 Montague Street, Brooklyn, N. Y.

GENTLEMEN:—It gives me pleasure to say that the electrical devices of your make which have been in use at the New York Polyclinic, have given me entire satisfaction.

Yours very truly,

LANDON CARTER GRAY.

April 28, 1886.

Mess. WAITE & BARTLETT:

BUFFALO, N. Y., May 6, 1889.

DEAR SIR:—For more than two years I had occasion to use your twenty-celled galvanic battery and during its service I always found it prompt and efficient. I was greatly pleased with the results obtained with it in every way.

Yours most respectfully,

ERNST WENDE, M. D., 174 Franklin St.

Mess. WAITE & BARTLETT:

BUFFALO, May 4, 1889.

GENTLEMEN:—I have been using a great many different batteries during my 30 years' practice and have made electricity somewhat of a specialty. I am happy to say that I am better pleased with your machines than any others that I have used. The wall cabinets are almost perfect and the Static is the best that I have ever seen.

Yours very truly,

B. N. BRAYTON, M. D.

Mess. WAITE & BARTLETT:

DEAR SIR:—I have carefully examined your cabinet battery and deem it most admirably adapted for a physician's office. The many conveniences it embraces do away with much of the trouble and annoyance that have made the use of electricity in medicine so very inconvenient. I cheerfully and warmly commend it.

Yours very truly,

W. S. TREMAINE, M. D.

Buffalo, N. Y., May 6, 1889.

I take pleasure in stating that I have examined the various instruments and appliances made by Messrs. WAITE & BARTLETT, and am convinced that in perfection and accuracy of workmanship, and in elegance of design they have no superiors in the market. I can cordially commend them to all who are contemplating purchase of such goods.

ROSSELL PARK, M. D.

Mess. WAITE & BARTLETT MFG. CO.:

Buffalo, N. Y., June 15, 1889.

In giving you this letter I do so with considerable personal satisfaction. You will remember how bitterly skeptical I was when I first met you in respect to the subject of Electro-Therapeutics. Your science and assistance in connection with the patients whom I submitted to your care while in Buffalo, has proved exceedingly valuable to me, and of untold benefit to those chronic sufferers.

In commending your Cabinet Battery I may say that it is very simple in its manipulation, and quite handsome in its construction. The other electrical apparatus I purchased from the WAITE & BARTLETT MANUFACTURING COMPANY evidences the same skill and perfection, both from a mechanical as well as practically scientific standpoint; consequently I commend your electrical appliances very highly. Hoping to see you in Buffalo again before long, I am, yours very sincerely,

H. E. HAYD.

Mess. WAITE & BARTLETT:

Buffalo, N. Y., June 15, 1889.

I have been using almost daily the Faradic, Galvanic and Galvano-Cautery Electrical Instruments of the WAITE & BARTLETT MANUFACTURING COMPANY of New York, for the past four years, and take great pleasure in testifying that the durability, effectiveness and ease of management, and the precision of measuring the current, have given me the greatest satisfaction. I have also one of your Static Machines, and this also gives perfect satisfaction. The workmanship of all your goods is a marvel of beauty and ingenuity.

T. J. MARTIN.

Mess. WAITE & BARTLETT:

Buffalo, N. Y., April 15, 1889.

DEAR SIR:—I desire to order one of your Static Electricity Machines with six revolving twenty-six inch plates. It is but justice to you to say that after examining the machine of Carre and of Trouve in Paris, and of Hirschmann in Berlin, I have decided upon yours as being best adapted for the purposes for which it is designed.

Very truly yours,

J. W. PUTNAM.

Mess. WAITE & BARTLETT:

72 Lafayette Avenue, Detroit, Nov. 27, 1888.

GENTLEMEN:—* * * I am very well pleased with the cabinet battery, and have lost no opportunity of exhibiting it to my professional brethren as well as my students of the University of Michigan.

Yours very truly,

DONALD MACLEAN, M. D.

DR. RIGGS, ST. PAUL.

St. Louis, Mo., July 31, 1887.

DEAR DOCTOR:—You recollect, I presume, that I wrote to you last winter asking your advice in reference to WAITE & BARTLETT's electrical apparatus. Since you were decidedly in favor of their instruments I ordered one of their Static Machines, and now after eight months of trial, I must say that I am more than pleased with the apparatus. It never ceased to work, even in the most unfavorable weather, giving immense quantities of static electricity. Altogether it is a magnificent piece of work, and I write this letter to you to let you know that your recommendation of the firm was well deserved.

Yours truly,

CHAS. HEYER, M. D.

910 North 10th St., St. Louis, Mo.

Mess. WAITE & BARTLETT:

G. BENTON MASSEY 1706 Walnut St.,

Philadelphia, Feb. 14, 1889.

GENTLEMEN:—I regret exceedingly that an examination of your batteries and other apparatus which I have just made at your request, was not made before the completion of my recent work on "Electricity in the Diseases of Women," as I should then not have failed to commend certain excellencies found in them. Your meter responds perfectly to an actual test and comparison with others, and the other apparatus appears to be all right. There are some special points about the portable galvanic batteries that appear to me to add greatly to their efficiency and reliability.

I am, very truly yours,

G. BENTON MASSEY, M. D.

ELECTRICAL NOTES AND DEFINITIONS.

Resistance, R.—The **Ohm** is equal to 10^9 C.G.S.* units of resistance. The **Legal Ohm** (Paris Congress, April, 1884) is the resistance of a column of pure mercury, 1 square millimeter in section, and 106 centimeters long at the temperature of melting ice.

One volt is that Electro-Motor Force which will send a current of one ampere through a resistance of one ohm.

Our ampere decomposes .00009324 gramme of water (H^2O) per second. or deposits 1.118 milligrams. of silver per sec. = 4.025 grms. per hour.

Thus we see that in every circuit there are three things—E.M.F. current and resistance; if we know the values of any two of these, it is possible to find the value of the third. We can do this according to Ohm's law.

Ohm's Law.

Let E stand for E.M.F. (volts.)
 " C " current (amperes.)
 " R " resistance (ohms.)

Then

$$C = \frac{E}{R}, \text{ or } R = \frac{E}{C}, \text{ or } E = C + R.$$

Thus suppose in a circuit there is a battery having an E.M.F. of 50 volts, and that the circuit has a total resistance of 25 ohms we can find the strength of the current by dividing the volts by the ohms. thus—

$$\frac{50 \text{ volts}}{25 \text{ ohms}} = 2 \text{ amperes.}$$

In the second case, we know the E.M.F. of the current in the circuit; let them be respectively 30 volts and 45 amperes; then

$$\begin{aligned} \text{the resistance of the circuit} &= \frac{30 \text{ volts}}{45 \text{ amperes}} \\ &= \frac{2}{3} \text{ of an ohm.} \end{aligned}$$

In the third case—when we know the current and resistance have to find the E.M.F.—let the current strength be 7 amperes, and the total circuit resistance 3 ohms; then

$$E.M.F. = 7 \text{ times } \times 3 \text{ ohms} = 21 \text{ volts.}$$

Very small currents, as used in electrical treatment of disease, are measured in milliamperes.

$$1 \text{ milliampere} = \frac{1}{1000} \text{ th ampere.}$$

$$\therefore 1 \text{ ampere} = 1000 \text{ milliamperes.}$$

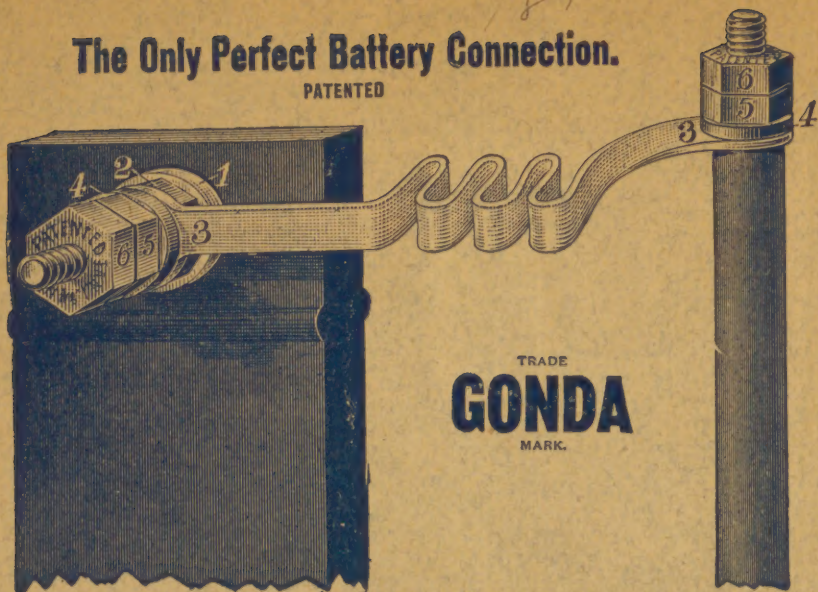
COMPARISON OF VARIOUS E.M.F.'s.

	VOLTS.
AXO Leclanche Cell,	1.60
Law, "	1.33
Diamond "	1.27
Samson "	1.35
Bichromatic "	1.90

26
65
85

The Only Perfect Battery Connection.

PATENTED



NO CORROSION.

NO LOOSENING.

NO DEVELOPMENT OF RESISTANCE.

NO OXIDATION.

NO LOCAL ACTION.

NO TROUBLE

OF ANY KIND.

Users of batteries are well aware of the faults existing in all Connections in common use, and of the endless trouble and expense caused thereby, and will understand and appreciate the value of a connection which is free from these faults.

PLEASE EXAMINE THE ABOVE CUT,

And you will at once recognize its merits, which are self-evident.

1 is a washer made of a composition practically non-oxidizable, and which cannot be corroded by the battery salts. A like washer is on the other side of the carbon. Through these two washers and the carbon runs a screw made of zinc.

2 is a zinc nut placed on the screw and turned up tight against the washer **1**, to bind the whole tightly to the carbon.

3 is a connecting strip of flexible metal, not subject to oxidation or corrosion, which is placed upon the zinc screw for the purpose of connecting the carbon pole of one cell to the zinc of another.

4 is a zinc washer to prevent the strip **3** from being twisted when the nut **5** is screwed up.

5 is a zinc nut to be screwed up tight against the washer **4**, to bind the connection, and

6 is a check nut of zinc to reinforce **5**.

The crews on both carbon and zinc are of the same size and thread, and the nuts on both are alike and interchangeable. No local action is possible between the carbon and the zinc screw, because they do not touch, the electrical contact being made through the non-oxidizable washers.

All Batteries furnished by the WAITE & BARTLETT MFG Co. for Physician's Office Cabinets have the above connection. The connecting strip is attached to the carbon and only needs to be slipped over the screw on the zinc of the next cell and tightened up. One of the great advantages is the doing away with the copper wires which have hitherto been used to connect cells and which so frequently oxidize and impair the effectiveness of the battery.

PRICE OF EXTRAS.

<i>Cautery Cords, per pair</i>	\$2.25
<i>Conducting Cords, five ft.,</i>	.60
“ “ ten ft.,	1.00
<i>Handles, per pair,</i>	.50
<i>Sponges,</i>	.75
<i>Cords, Handles and Sponges,</i>	1.75
<i>Complete Faradic Element,</i>	2.00
<i>Faradic Cell,</i>	.50
“ Zinc,	.25
“ Carbon,	.25
“ Zinc Ring,	.25
“ Binding Post,	.15
“ Hard Rubber Cap,	.50
“ Soft Rubber Cork,	.10
“ Soft Rubber,	.10
<i>Galvanic Zinc,</i>	.20
“ Carbon,	.20
“ Connection,	.10
“ Cell,	.25
<i>Battery Fluid, per pt.,</i>	.25
“ “ “ qt.,	.40
“ “ “ half gal.,	.60
“ Compound, per can,	.75
<i>Sulphate of Copper, per lb.,</i>	.12
<i>Bichromate of Potash, per lb.,</i>	.30
<i>Salamoniac, per lb.,</i>	.20

All orders amounting to five dollars or less must be accompanied by Cash. Postage will be charged on all goods sent by mail. The above Prices are Net.